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COUNTRY Bulgaria

REPORT

SUBJECT Specific Railroad Lines in Bulgaria

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INFORMATION REPORT INFORMATION REPORT

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SPECIFIC RAILROAD LINES IN BULGARIA (C)

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List of Coordinates

Listed below are the names and geographic and UTM coordinates of locations used throughout this report. Coordinates are not shown for well-known locations or for connecting railroad and highway points.

<u>Location</u>	<u>Geographic</u>	<u>UTM</u>
ARKOVNA	N43-02, E27-12	NH-1664
ASENOVO	N43-17, E26-02	MH-2193
ASPARUKHOVO	N43-00, E27-20	NH-2658
BELBREG	N43-03, E27-08	NH-0867
BOSILKOVO	N42-49, E27-02	NH-0040
BOZHIDAR	N43-37, E27-06	NJ-0729
BREG	N43-16, E26-34	MH-6792
CHERVENBREG	N43-16, E24-05	KH-6396
DASKOTNA	N42-52, E27-10	NH-1547
DEVNYA	N43-13, E27-33	NH-4585
DIBICH	N43-14, E27-00	NJ-0086
DIMITROVO	N42-36, E23-02	FN-6719
DRALEA	N43-20, E26-26	MH-5498
DULGOPOL	N43-03, E27-21	NH-2766
EMIROVO	N42-56, E27-16	NH-2154
GORNA ORAKHOVITSA	N43-07, E25-41	LH-9375
IKHTIMAN	N42-26, E23-49	GN-3102
IVANSKI	N43-08, E27-02	NH-0376
KALITNETS	N43-07, E25-41	LH-9377
KARDAM	N43-45, E28-06	NJ-9045
KASPICHAN	N43-18, E27-10	NH-1494
KLIMASH	N42-47, E26-54	MH-9236
KOCHOVO	N43-14, E26-28	MH-8485
KOLAROVGRAD	N43-16, E26-54	MH-9491
KOMUNARI	N43-01, E27-18	NH-2362

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<u>Location</u>	<u>Geographic</u>	<u>UTM</u>
KURDZHALI	N41-39, E25-23	LQ-6412
KURILO	N42-49, E23-21	FN-9244
LEVSKI	N43-15, E26-36	MH-6990
LISTETS	N42-52, E27-08	NH-1046
LIULIAKOVO	N42-52, E27-06	NH-0646
LOZAREVO	N42-47, E26-53	MH-9035
MADARA	N43-17, E27-06	NH-0791
MARASH	N43-12, E26-57	MH-9683
MEZDRA	N43-09, E23-43	GN-1979
NOVA SHIPKA	N43-03, E27-33	NH-4467
NOVI PAZAR	N43-21, E27-12	MH-1598
PARTIZANI	N43-01, E27-15	NH-2062
PETAR BARON	N42-51, E26-55	MH-9444
POBIT KAMAK	N42-35, E23-42	GN-1819
PODKOVA	N41-24, E25-24	LP-6684
PODVIS	N42-50, E26-51	MH-8742
POLIKRAISHTE	N43-11, E25-37	LH-8881
POLYANOVGRAD	N42-39, E26-59	MH-9922
PRESLAV	N43-10, E26-49	MN-8579
PROVADIYA	N43-11, E27-26	NH-3681
RADKO DIMITRIEVO	N43-11, E27-01	NH-0181
RAKOVETS	N43-01, E27-33	NH-4463
RAZDELNA	N43-10, E27-38	NH-5179
RESEN	N43-12, E25-35	LH-8382
SAMOVODENE	N43-08, E25-36	MH-8677
SINDEL	N43-07, E27-36	NH-4973
SLAVYANOVO	N43-17, E26-11	MH-3393

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<u>Location</u>	<u>Geographic</u>	<u>UTM</u>
SLIVEN	N42-40, E26-19	MH-4425
SMEDOVO	N43-04, E27-01	NH-0168
STARO ORYAKHOVO	N42-59, E27-48	MH-6560
STARA ZAGORA	N42-25, E25-38	LQ-8897
TEMNISKO	N43-08, E25-40	LH-9078
TODOR IKONOMOVO	N43-39, E27-10	NJ-1331
TOLBUKHIN	N43-34, E27-50	NJ-6624
TRAPISHTA	N43-22, E26-32	MJ-6202
TSAR KRUM	N43-12, E26-53	MH-9183
TURGOVISHTA	N43-15, E26-34	MH-6588
TURNAK	N42-57, E27-12	NH-1755
TURNOVO	N43-05, E25-39	LH-8970
VAKAREL	N42-33, E23-43	GN-2215
VELICHKOVO	N43-03, E27-27	NH-3666
WEBEL	N43-15, E26-33	MH-6189
YANTRA	N43-12, E25-41	LH-9284
YUNAK	N43-05, E27-37	NH-4969
ZAICHARI	N42-50, E27-01	MH-9842
ZAVET	N42-50, E27-04	NH-0542
ZHELAD	N43-03, E27-11	NH-1366
ZIMNITSA	N42-35, E26-36	MH-6714

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SPECIFIC RAILROAD LINES IN BULGARIA (c)

Introduction

1. Line 1, SOFIA-PLOVDIV-STARA ZAGORA-ZIMNITSA-BURGAS

a. Route

This was one of three lines crossing Bulgaria in an east-west direction. It crossed the broad upland plains around SOFIA, climbed through the central mountain ranges from POBIT KAMAK, and reached its highest point near VAKARDEL. It then descended to IKHTIMAN, following the valley of the Maritsa River to PLOVDIV, from where it crossed the plains to STARA ZAGORA and continued to BURGAS.

The sector ZIMNITSA-POLYANOVGRAD was part of both line 1 and line 3.

b. Permanent Way

This was a single-track, standard-gauge railway (4 feet, 8 1/2 inches), with an axle load limit of about 30 tons (30,000 kg). It was built of Type-41 rails (rails weighing 41 kg per m).

c. Limiting Characteristics

The ruling grade of the line was the 2.5 percent grade between POBIT KAMAK and IKHTIMAN, where freight trains were normally pulled by two engines. The minimum radius of curvature of this line was 500 m, but there could have been a few exceptions. Until 1950 a minimum radius of curvature of 350 m was permissible, and it was possible that a few curves were not corrected when the minimum was changed. There were no tunnels on this line.

2. Line 2, SOFIA-MEZDRA-GORNA ORAKHOVITSA-VARNA

a. General Information (For location and detailed description of the Gorna Orakhovitsa-Kochova-Tsar Krum- Varna sector, see Annexes A and B)

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b. Route

Line 2 was the most northern of the three east-west railroad lines across Bulgaria. From SOFIA, it passed through MEZDRA, CHERVENEBROG, PLEVEN, LEVSKI, GORNA ORAKHOVITSA, ASENOVO, KOLAROVGRAD, KASPICHAN, SINDEL, and RAZDELNA. At SINDEL, Lines 2 and 3 converged and continued as one line to VARNA. Leaving SOFIA, Line 2 descended and followed the Iskur Gorge through the Balkan Mountains to MEZDRA, from which it gradually ascended to PLEVEN. From PLEVEN it traveled the Danube upland plains to the Black Sea, crossing many tributaries of the Danube River.

c. Traffic

Four passenger trains, two express and two local, ran daily on this line; three went from SOFIA to VARNA and back and one from SOFIA to KASPICHAN and back. In summer, an additional express train made a round trip from SOFIA to VARNA.

d. Description

This was a standard-gauge, single-track line, except for two short sectors, SOFIA-KURILO and RESEN-GORNA ORAKHOVITSA, where there were two tracks. Between ASENOVO and SLAVYANOV, the maximum gradient was 3 percent; along the rest of the line it was 2.5 percent. There were no curves with radii less than 350 m. On the Sofia-Gorna Orakhovitsa sector, the maximum axle load was approximately 40 tons; on the Gorna Orakhovitsa-Varna sector, where there were still Type-41 rails, it was approximately 25 tons. Between ASENOVO and SLAVYANOV, the trains were pulled by an additional locomotive from the depot at ASENOVO, which was established there for this purpose.

There were many bridges and culverts on this line. There were 18 or 19 tunnels, all on the Kurilo-Mezdra sector. They were of varying length; 4 or 5 of the longest were about 100 m. In addition, there were many bridges, viaducts, cuts, and slide areas in this sector. From MEZDRA to VARNA, all critical points were either bridges or rail centers.

e. Gorna Orakhovitsa Railroad Station (For sketch of site layout see Annex C; for location, see Annex D, Item 4)

This was the most important rail center on this line, serving as the junction for lines connecting RUSE with southern Bulgaria and for lines connecting SOFIA with VARNA. Because of its importance, a project was initiated in 1949 for building a network of by-pass lines around it (see Annex D for overlay and details on these by-pass lines). [redacted] the entire project would be completed sometime in 1959. [redacted]

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The Gorna Orakhovitsa railroad station area included as its peripheral points the following railroad stops: SAMOVODENE, POLIKRAISHTE, YANTRA, and the sugar factory stop 3 km east of KALTINETS. When the by-pass line from SAMOVODENE to RESEN was completed, RESEN was to take the place of POLIKRAISHTE as a peripheral substation.

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This station had an underground command post, built in 1953 or 1954 at an unknown location, of the same type as those at the Kaspichan and Pleven stations. The station also had a communications center called "Preko" at an unknown location.

f. Asenovo Railroad Station (for location, see Annex A, Item 8; for sketch of site layout, see Annex E)

This station had approximately six main tracks, with an average length of 600 m, and an auxiliary locomotive depot. Source believed it had a centralized traffic control system. All trains stopped at this station for 15 or 20 minutes to have their locomotive pits cleaned and to take on water. Since locomotives were changed at GORNA ORAKHOVITSA, they had to have their pits cleaned at ASENOVO.

g. Turgovishte Railroad Station (for location, see Annex A, Item 22; for sketch of site layout, see Annex F)

This station had seven tracks, five approximately 600 m long, one 400 m long, and one 350 m long; they were numbered one through seven. Four [] were running tracks and three were body tracks. In addition there was an unloading spur (track 8) used to unload coal and wood; coal for all Turgovishte Okoliya and wood for TURGOVISHTE were stockpiled here. For the purpose of supplying fuel to the people, the country was divided into regions and one station in each region was designated as the fuel supply point.

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Locomotives were cleaned of cinders and supplied with water at this station. Passenger trains stopped here approximately 15 minutes, freight trains a little longer.

h. Kaspichan Railroad Station (for location, see Annex B, Item 60; for sketch of site layout, see Annex G)

KASPICHAN was the most important porcelain and brick producing area in Bulgaria; several factories of both types were near the station. From here porcelain was shipped to all parts of Bulgaria and brick throughout Kolarovgrad Okoliya and to VARNA. KASPICHAN was also a grain center, and grain was one of the principal freight commodities.

This station was a junction for three standard-gauge lines: Line 2, the Kaspichan-Ruse railroad line, and the Ruse-Varna railroad line. At least two passenger trains to RUSE were made up here daily, and during the summer months two additional trains passed through this station from RUSE to VARNA. A morning train for SOFIA was made up here, and the station was the final stop for a train from SOFIA. Freight trains to VARNA, KOLAROVGRAD, RUSE, and GORNA ORAKHOVITSA were made up here. Locomotives based in GORNA ORAKHOVITSA and VARNA traveled to KASPICHAN and then returned to their station of origin. The station, which had 13 tracks and 2 spurs, serviced about 15 passenger trains, which ran on standard-gauge lines. The tracks were approximately 600 m long; Track 1 was a through track used by trains running from SOFIA to VARNA; track 3 was a through track for trains to and from RUSE; tracks 4 through 13 were used, tracks 4-11 being used by trains for travel and switching. The station had an automatic switch and signal control system and also switch control towers at both ends of the yard (exact locations unknown) from which switches could be controlled manually or semiautomatically.

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This was also the transloading station for the narrow-gauge (60 cm) line TODOR IKONOMOVO - BOZHIDAR-KASPICHAN. All transloading was done manually. Wood, wheat, and pure kaolin, the base material of porcelain, from the mine at BOZHIDAR, were transported on this line. The narrow-gauge yard at KASPICHAN had five or six tracks 300 m long, two of which were built up to put them on a level with the normal-gauge spur. Trains running on the narrow-gauge line took on water and coal here, and there were also maintenance and cleaning facilities and a classification yard for narrow-gauge-line trains. The Cherkvitsa railroad station was the only other one on this line with water and coaling facilities. Switches and signals in the narrow-gauge yard were controlled manually. Three or four passenger trains a day ran the entire length of this line and at least three more a day went as far as NOVI PAZAR.

i. Sindel Railroad Station (for location, see Annex B, Item 79; for sketch of site layout, see Annex H)

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This station was the junction of three lines: Line 2, Line 3, and the Sindel-Yunak-Staro Oryakhovo railroad line. A great deal of bamboo was grown in this area and shipped to all parts of the country. In addition the area had brick and tile industries. This station, consequently, was very active and was frequently overloaded.

About 25 passenger trains daily passed through this station.

there was a state reserve coal stockpile, location unknown. Switches and signals were centrally controlled from the station building.

j. Razdelna Railroad Station (for location, see Annex B, Item 85; for sketch of site layout, see Annex I)

This station was the junction of Line 2 and the Kardam-Varna railroad line. Approximately 30 passenger trains passed through it daily;

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The station had a centralized traffic control system, operated from the station building. There was a state reserve coal storage area (location unknown), but no water, coaling, or maintenance facilities. A narrow-gauge line led to this station from a brick and tile factory 4 to 5 km to the northeast.

k. Varna Railroad Terminal (for location, see Annex B, Item 98; for sketch of site layout, see Annex J)²

(1) Importance

This was one of the most important rail centers in Bulgaria, since VARNA was Bulgaria's largest harbor and served as a transshipment point not only for northern Bulgaria but also for Czechoslovakia and Hungary. Live-stock from abroad was shipped to VARNA and from there transported by rail to Czechoslovakia and Hungary. Coal, wood, crude oil, uranium ore, grapes, cut apples in barrels of liquid, and other goods were transported by rail from the interior to VARNA and shipped abroad from there. In addition VARNA was an important industrial area. Various products, electrical appliances, canned fish, and meat products were manufactured there and sent by rail or ship to other countries.

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(2) Traffic

At least 20 passenger trains were made up here daily and about the same number arrived daily from other stations.

In 1954, when the Ministry of Transportation and Telecommunications requested a survey of the number of trains passing over a grade crossing in this station, one man at the crossing for 30 days to count the trains. The survey revealed that on an average a train passed over this crossing every 5 minutes. As a result, a new overpass was built at this point (see Annex J, Item 54). Switch control at this station was partly manual and partly electric; the receiving and ready track switches were electrically operated, the others manually.

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(3) Personnel

The Varna station had spurs spreading over the entire peninsula and harbor area. Everything was directed and controlled by one stationmaster. Subordinate to him in operational matters were his assistant, the chief of the freight station, and the chief of rolling stock. The dispatcher of the classification yard was subordinate to the stationmaster only in administrative matters; in operational matters he was subordinate to the chief of the freight station. In addition to the railroad line maintenance personnel, approximately 200 men were employed in this station, of whom 100 worked in the rolling stock department.

3. Railroad Line KOLAROVGRAD-KOMUNARI and Railroad Line POLYANOVGRAD-KOMUNARI-RAZDELNA (Sector of Line 3) (For location of these lines, see Annex K)

a. General Information

Until 1955, the line from KOLAROVGRAD to POLYANOVGRAD was designated in the technical books of the Bulgarian Ministry of Transportation and Telecommunications as the Kolarovgrad-Polyanovgrad railroad line. In 1955, the Sofia-Sliven-Polyanovgrad-Komunari-Varna railroad line was officially designated Line 3. As a result, the Polyanovgrad-Komunari sector of the old Kolarovgrad-Polyanovgrad line became a sector of Line 3. These two lines are covered under one heading.

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a study of this line prepared cost estimates on its maintenance as part of an over-all study of the Bulgarian railroad system.

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The condition of this sector was one of the most critical in Bulgaria. It was built relatively rapidly between 1937 or 1938 and 1941 to meet military needs. In spring 1939 the Kolarovgrad-Smedovo sector was put into operation and in fall 1941 the Smedovo-Polyanovgrad sector. Because of the pressing need for the line, it was decided to deviate from the original plans and build it along the easiest route, obviating the necessity for building many bridges and long fills. As a result, however, there were many landslide areas along the route. Maintenance on this line was of necessity continuous. Almost every year work was done on landslide areas, some of which were impossible to control permanently, and still the line was not safe for traffic. The line was built in accordance with the maximum grade specifications for heavy and Type-3a rails and wooden ties were used.

the Komunari-Razdelna sector of Line 3 This line was built of Type ULE-32 rails and impregnated wooden ties. The Yunak-Komunari section was completed and placed in operation in fall 1943. The steepest grade on this section was 2 percent and lay between the Yunak and Nova Shipka stations.

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b. Komunari Railroad Station (for location, see Annex K, Item 83; for sketch of site layout, see Annex L)

This station was an important rail junction of Lines 2 and 3. It had 11 or 12 tracks approximately 600 m long. Trains between KOLAROVGRAD and KOMUNARI in both directions took on coal here, and all trains took on water. Passenger trains made a 15-minute stop.

In 1953, five tracks were built at the southwestern end of the station for international freight trains, which, at that time, were being routed through Rumania via KARDAM, where they were re-formed, to southern Bulgaria. The reason for this routing was twofold: relations between Yugoslavia and the Soviet-Bloc countries were strained, and the port of VARNA was closed to international shipping and used only by barges. A temporary locomotive depot was also built in 1953. After 1955, when the bridge at RUSE was completed, the station lost its importance in international freight traffic; it was still, however, used for parking freight cars.

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c. Smedovo Railroad Station

For location, see Annex K, Item 24; for sketch of site layout, see Annex M.

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Legend to Annex A

(For Annex A, See Attached Envelope.)

1. Gorna Orakhovitsa locomotive depot - All trains on Line 2 and the Ruse-Podkova railroad line stopped here to change locomotives and personnel. There were facilities here for repair, maintenance, cleaning, and refueling.
2. Railroad underpass - See Annex C, Item 3, for details.
3. Kozarevets railroad station - This station had at least three tracks, approximately 500 m long. Only passenger trains stopped here. There was a reserve coal stockpile, but it was to be used only in case of emergency. There were no water or other coaling facilities.
4. Railroad bridges -
5. Dzhulyunitsa railroad station - This station had at least four tracks, 600 m long. There was a state reserve stockpile of coal in briquette form, quantity unknown. the station building was on the north side of the tracks. Trains passed each other at this station. Only passenger trains stopped here.
6. Strazhitsa railroad station - This station had at least six tracks, approximately 600 m long. Only passenger trains stopped here. Trains passed each other in this station. There were no water or coaling facilities. There was a state reserve coal stockpile, quantity unknown.
7. Spur to unidentified military depot. '
8. Asenovo railroad station.
9. Railroad bridge - This was a steel deck-type bridge, approximately 8 m long, resting on stone abutments.
10. Steep grade - From approximately 1.5 km east of the bridge (Item 9) to approximately 1.5 km south of Slavyanovo railroad station (Item 11), there was a gradient which became as steep as 3 percent. Except for the summer express trains, all trains had to have an additional locomotive to pull them from the Asenovo to the Slavyanovo railroad station. These extra locomotives returned to ASENNOVO without cars. This sector was in defilade, and during practice air-raid alerts locomotives and trains were dispersed along it.
11. Slavyanovo railroad station - This station had four tracks, approximately 600 m long. Trains passed each other in this station. The station building was on the east side of the tracks, not on the west side as it appears on the map. There were no water or coaling facilities.
12. Popovo railroad station - This station had five or six tracks, approximately 600 m long, and a loading ramp, approximately 150 m long, west of the station building. The station building was north of the tracks and not as it appears on the map. There were no water or coaling facilities.
13. Guarded railroad crossing - The barriers were raised and lowered manually. Signals for operating the barriers were received from the Popovo and Dralfa railroad stations.
14. Dralfa railroad station - This station had three tracks, approximately 600 m long. The station building was on the north side of the tracks and not as it appears on the map.

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Continuation of Legend to Annex A

15. Railroad bridge and sharp curve - This was a stone-arch bridge, approximately 6 m long. Between the bridge and the track was a fill 1 m high. At the same location was a curve with a radius of approximately 300 m. In 1951, a project was initiated to correct the alinement of this curve; construction was completed in 1953. It included building a new concrete deck-type bridge, 6 m long, and laying a fill 1 m high on top of the bridge. As of January 1958, the track had not been laid over the new bridge. The new track was to be laid when the project to replace all rails on this line with Type-49 rails reached this point. 25X1
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this would be sometime in 1959 or 1960.
16. Zdravets railroad station - This station had four tracks, approximately 600 m long. There were no water or coaling facilities. 25X1
18. Alinement (of this line) as it appears on the map - 25X1
this was the proposed route. The construction was to be completed in 1959 or 1960 (see Item 15).
19. Alinement of this line as it appears on the map.
20. Two culverts - These culverts, 1 m wide and .5 m high, were of railroad ties and spanned two streams (no names). They were not large enough and were continually filling with trash, which resulted in this sector being flooded during the rainy season. A number of projects to improve these culverts had been initiated but, because the condition was not critical and because of a lack of funds, they were never realized.
21. Railroad bridge - This was a stone-arch bridge, 4 m long.
22. Turgovishte railroad station.
23. Railroad bridge - This was a 2-span steel Parker-truss bridge, 35 to 36 m long, with an underbridge clearance of 10 to 15 m.
24. Guarded railroad crossing - The barriers were operated manually. The bell signals to raise or lower the barriers were received from the Turgovishte and Nadarevo railroad stations.
25. Location of former passing track - The 20-kilometer sector between the Turgovishte and Nadarevo railroad stations was the longest on Line 2 without a railroad stop. During World War II there was a passing track at this point, which later was removed and used elsewhere because of the shortage of rails. The bed, however, was left as it was for later use.
26. Nadarevo railroad station - This station had four tracks, 600 m long, and a loading ramp, 100 m long. There were no water or coaling facilities. A semiautomatic switch and signal control system was employed, operated from the station building.

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Continuation of Legend to Annex A

28. Two railroad bridges - These were steel-girder through bridges, each approximately 8 to 10 m long, with stone abutments.
29. Present course of Varna River - The course of this riverbed was altered in 1950.
30. Koochovo railroad station - This station had at least three tracks, 600 m long. There were no water or coaling facilities. A semiautomatic switch and signal control system was employed in this yard.

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Legend to Annex B

(For Annex B, See Attached Envelope.)

32. Railroad bridge - This was a steel girder bridge, 4 m long, resting on stone masonry abutments. Clearance under the bridge was 1.5 m.
33. Railroad line to PRES LAV.
34. Tsar Krum railroad station - This station had 5 or 6 tracks, 600 m long, and a loading ramp approximately 150 m long. There were no water or coaling facilities. A semiautomatic switch and signal control system was employed in this yard, operated from the station building. This station was the junction of Line 2 and Preslav-Tsar Krum railroad line. At this station was a rail tie and telephone pole impregnation plant, which had a loading ramp approximately 200 m long.
35. Guarded railroad crossing - The barriers were lowered and raised manually upon signals received from the Tsar Krum station.
36. [redacted] Points of reference were MARASH, the Tsar Krum railroad station, and the Kamichiya River.
37. Railroad bridge - This was a concrete girder bridge, 4 m long, resting on stone abutments. It spanned a dry stream bed; [redacted] the location of a dirt road at this point on the map was incorrect; he said it was approximately 500 to 600 m west of this point.
38. Dry stream bed.
39. Guarded railroad crossing - Upon receipt of bell signals from the Tsar Krum or Kolarovgrad railroad stations, the barriers were manually raised or lowered by the watchman stationed at this crossing.
40. Third-class road - It was 4 m wide and of waterbound macadam.
41. Railroad bridge - This was a stone-arch deck-type bridge, approximately 4 m long.
42. Former passing point - The grade of the Tsar Krum-Kolarovgrad sector was 2 percent. As a result trains had to travel very slowly. During World War II there was a passing track here. Later, the rails were removed for use elsewhere, but the ballast was not touched. The point was 600 m long.
43. Railroad bridge - This was a stone-arch deck-type bridge, 4 m long. Between the bridge and the track was a fill 4 m high.
44. Normal-gauge spur to the Kolarovgrad Brewery.
45. Proposed site for amusement park railroad line - This line was to be 2 to 3 km long and use 60-cm-gauge tracks. It was to be used and operated by children.
46. Kolarovgrad railroad station [redacted] Kolarovgrad Railroad Station Yard, dated 16 July 1958.

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Continuation of Legend to Annex B

47. Railroad overpass - See report mentioned in Item 46.
48. Railroad bridge - This bridge spanned the Boklugansko Dere Stream. See report cited in Item 46.
49. Railroad line Kolarovgrad-Polyanovgrad.
50. Railroad bridge - This was a stone-arch bridge, 10 m long, with an under-bridge clearance of 4 to 5 m. Between the bridge and the track was a fill approximately 70 m long and 40 m wide at its base. The sides sloped at a ratio of 2:1.
51. Guarded railroad crossing - The barriers were raised and lowered manually upon signals received from the Kolarovgrad and Mutnitsa railroad stations.
52. Mutnitsa railroad station - This station, built in 1949, had four tracks, 600 m long. A semiautomatic switch and signal control system operated from the station building was employed.
53. Railroad bridge - This was a stone-arch bridge, 3 to 4 m long. Between the bridge and the track was a fill 1 to 1.5 m high.
54. Railroad bridge - This was a concrete deck-type bridge, 5 m long, on stone abutments. It had metal guardrailings 1 m high; clearance under the bridge was 3 to 4 m.
55. Railroad bridge - The same description as Item 54.
56. Madara railroad station - This station had four tracks, 600 m long, and a loading ramp 50 m long. A semiautomatic switch and signal control system operated from the station building was employed in this yard. MADARA was the capital of Bulgaria during the Tsar Krum era (814 AD). It was important to historians and a favorite tourist attraction.
57. Spur to Kalugeritsa quarry.
58.
59. Railroad bridge - This was a concrete deck-type bridge, 4 to 5 m long, on stone abutments. It had guardrailings 1 to 1.5 m high; clearance under the bridge was approximately 3.5 m.
60. Kaspichan railroad station - In 1954, the Kolarovgrad-Kaspichan sector of this line underwent general repair (osnoven remont), including its permanent way and switches and rail joints (as needed).
61. Standard-gauge railroad line RUSE-KASPICHAN,

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Continuation of Legend to Annex B

62. Narrow-gauge railroad line KASPICHAN-TODOR IKONOMOVO.
63. Railroad bridge - This was a steel deck-type bridge, 4 m long, resting on stone abutments. It spanned the former bed of the Madara River. Clearance under the bridge was 1.5 m.
64. Railroad bridge - This was a concrete deck-type bridge, 4 m long, with stone abutments. It spanned the Madara River. Clearance under the bridge was 2 m. It was built in 1955, when the construction project altering the course of the Madara River was under way.
65. Present course of Madara River - In 1955, a project was begun to alter the courses of the Madara and Provadiyska Rivers. The course of the Madara from a point 100 m west of the bridge described in Item 59 to where it flowed into the Provadiyska River was to be altered. The course of the Provadiyska River from where the Madara River flowed into it to a point several kilometers southeast of PROVADIYA was to be altered. In fall 1957, this project still had not been completed.
66.
67. Nevsha railroad station - This station had 4 or 5 tracks, 600 m long; a loading ramp 100 m long; and a spur to a local grain warehouse. There were no water or coaling facilities.
68. The sector of this line between Items 60 and 67 was concealed by large trees along both sides. In addition, the sector between Items 66 and 67 was in defilade. In practice air-raid alerts all locomotives from the Kaspichan depot were concealed by dispersing them along this sector.
69. Venchan railroad station- This station had two tracks, 600 m long, and one spur, which led to an unidentified military depot (Item 70).
70.
71. Provadiya railroad station - Trains took on water at this station.
72. Dobrina railroad stop - This was the old Provadiya station; it had 2 or 3 tracks, 600 m long.
73. Vasil Kolarov railroad station - This station had 5 or 6 tracks, 600 m long.
74. Spur to granary.
75. Two spurs to salt plants.
76. Zhitnitsa railroad stop - There were 2 tracks, 600 m long.
77. Tsarevo railroad stop - There were 2 tracks, 600 m long.

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Continuation of Legend to Annex B

78. Railroad bridge - This was a steel girder deck-type bridge, 4 m long, with stone abutments and a vertical underbridge clearance of 2 m.
79. Sindel railroad station.
80. Yunak railroad station - This station was on the branch line POLYANOVGRAD-STARO ORYAKHOVO.
81. SINDEL - [] the outline of this village. [] used as points of reference the Sindel and Yunak railroad stations, Line 2, and the SINDEL-POLYANOVGRAD railroad line.
82. Drainage ditch through marsh area - Portions of this ditch were still being built in 1958.
83. Railroad bridge [] on the map.
84. Railroad bridge - This was a concrete girder bridge, 4 m long, with stone abutments and a vertical underbridge clearance of 2 m.
85. Razdelna railroad station.
86. Railroad line TOLBUKHIN-KARDAN.
87. Railroad bridge - See Annex I, Item 15, for details.
88. Narrow-gauge spur to brick and tile factory.
89. Beloslav railroad station - This station had 6 to 8 tracks, 600 m long; a normal-gauge spur (Item 94), which led to a glass factory; and a loading ramp 150 m long. Trains took on water at this station.
90. Railroad bridge - This 10-m-long steel bridge spanned a canal (Item 91). Its abutments were stone and its underbridge clearance was 5 to 6 m.
91. Canal - It was approximately 10 m wide and 5 to 6 m deep.
92. Narrow-gauge line from Dobrova Chuka quarry to bridge (Item 90) - Small dump cars carried the crushed rock from the quarry to the bridge, where it was dumped into barges or into cars on a normal-gauge spur (Item 93).
93. Normal-gauge spur - This spur ran alongside but at a lower elevation than the narrow-gauge spur (Item 92).
94. Normal-gauge spur to glass factory.
95. Railroad bridge - This was a steel bridge, 10 m long, with stone abutments and an underbridge clearance of 4 to 5 m.
96. Topolite railroad station - This station had 5 to 6 tracks, 600 m long, and a loading ramp 150 m long. Manganese ore brought by rail from a mine 12 to 15 miles northwest was loaded at this station.
97. Railroad bridge - This was a steel girder bridge, 4 m long, with stone abutments and an underbridge clearance of 3 m.
98. Varna railroad station.

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Legend to Annex C

(For Annex C, See Attached Envelope.)

1. Line 1 SOFIA-VARNA - The Resen-Gorna Orakhovitsa sector of this line was double-tracked.
2. Classification yard in POLIKRAISHTA - The number and lengths of tracks were unknown.
3. Spurs - There was an unknown number. Sand dredged from the river to be used for construction was stored in this area.
4. Tie-in line between the Sofia-Varna and Gorna Orakhovitsa-Ruse lines.
5. Passing track.
6. Yantra railroad station - It had six or seven tracks, of which three were through tracks (priemno pravni), 600 m long; the others were used as forwarding tracks.
7. Railroad line RUSE-GORNA ORAKHOVITSA-STARA ZAGORA-KURDZHALI-PODKOVA.
8. Tie-in line between Line 3 and the Ruse-Varna line.
9. Line 1, SOFIA-VARNA.
10. Tie-in line between line 3 and the Sofia-Turnovo-Stara Zagora railroad line. This line was under construction as of 1958 and was to run from RESEN to SAMOVODENE.
11. Samovodene railroad station.
12. Classification yard - This yard was under construction as of 1958.
13. Tie-in lines between Gorna Orakhovitsa station and classification yard (Item 12). These lines were under construction as of 1958.
14. Central railroad station at GORNA ORAKHOVITSA.
15. Receiving building - This was a cream-colored, 2-story building of stuccoed brick, 60 x 15 to 20 m, with a red-tile gabled roof. On the first floor were a waiting room in the middle section, a restaurant in the east wing, and offices in the west wing; on the second floor were quarters.
16. Postal and railway express office - This was a 1-story, stuccoed brick, cream-colored building with a red-tile gabled roof.
17. Washrooms.
18. Railroad militia headquarters - This was a 3-story, stuccoed brick, cream-colored building, approximately 30 x 15 m. with a red-tile gabled roof.
19. Unidentified office of the Railroad Inspectorate - This was a 2-story, stuccoed brick, cream-colored building with a red-tile gabled roof. It was 50 to 60 x 20 m.

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Continuation of Legend to Annex C

20. Unidentified office of the Railroad Inspectorate - This was a 2-story, stuccoed brick, cream-colored building with a red-tile gabled roof. It was 40 x 15 m.
21. Unidentified office of the Railroad Inspectorate - This was a 2-story, stuccoed brick, cream-colored L-shaped building with a red-tile gabled roof. The longer wing was 30 x 15 m; the shorter one was 15 x 15 m.
22. Recreational club, transient hotel, and cafeteria of the Railroad Inspectorate - This was a 3-story, gray-stuccoed brick building with a red-tile gabled roof. It was 40 x 15 to 18 m. The cafeteria and transient hotel were in operation 24 hours a day.
23. Building - 1-story, stuccoed brick cream-colored building, 50 x 10 m, with a red-tile gabled roof. In the west wing was the Capital Investment Section of the Railroad Inspectorate. Since 1957, the chief of this section was Simeon RASHKOV. The approximately 20 employees worked 46 hours per week: 8 hours per day Monday through Friday, and 6 hours on Saturday.
24. Temporary sheds - These were used as living quarters for personnel of the Construction Region for Transportation Matters in GORNA ORAKHOVITSA, which was subordinate to the Construction Department in SOFIA. They were also used as warehouses. There were approximately 10 sheds built of wood and stuccoed brick, 10 x 12 m, with red-tile gabled roofs.
25. Quarters - These were permanent quarters for personnel of the Construction Region for Transportation Matters, GORNA ORAKHOVITSA. There were five 3-story cream-colored buildings of stuccoed brick, 25 x 10 m, with red-tile roofs.
26. Administrative office of the Construction Region for Transportation Matters - The chief was Gencho Nenov KOSEV, a master builder, appointed in 1956. There were approximately 70 employees working in this office, including architects, engineers, technicians, and administrative personnel. They worked 46 hours per week. This building was of the same type as those described in Item 25.
27. Theater and library - This was also used as an auditorium.
28. Dispensary - This was a 3-story, stuccoed brick, cream-colored building with a red-tile gabled roof. It was 30 x 15 m.
29. Unidentified building - Formerly this building had been occupied by the Construction Region for Transportation Matters. It was a 2-story, stuccoed brick, cream-colored building, 20 x 12 m, with a red-tile gabled roof. In 1951, this region was transferred to KOLAROVGRAD; in 1955, it was returned to GORNA ORAKHOVITSA but was given offices in the building described in Item 26.
30. Building - This was a 1-story building, 20 x 4 m, in which there was a refreshment and newspaper stand.
31. Gorna Orakhovitsa locomotive shop - it contained water cranes and coaling facilities, two turntables, and facilities for repairing locomotives.

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Continuation of Legend to Annex C

32. Water station - This was a brick building. 6 x 10 m. [redacted]
33. Railroad personnel housing area - There were more than six, 3-story apartment buildings. [redacted]
34. Switch control towers - These brick towers were 6 x 6 x 13 m. The switches beside them were manually operated. One of the towers was for trains coming from SOFIA, one for trains from PODKOVA, and one for trains from VARNA.
35. Railroad bridge - This was a stone masonry arch bridge, 50 to 60 x 6 m, with 3 or 4 arches. Its approaches were on fills 8 to 10 m high and 100 to 150 m long; overhead clearance was unlimited. It had two piers and spanned a river 20 m wide. On the south bank of the river a dirt road passed under the bridge.
36. Highway overpass - This was a concrete slab deck-type highway overpass, 20 x 10 m, with an underbridge clearance of 4.5 m. The approaches were on fills 4 m high. The KALINETS-GORNA ORAKHOVITSA highway passed over the tracks at this point.
37. Railroad bridge - This was a steel Parker-truss bridge. [redacted] estimated [redacted] length as 70 to 100 m. [redacted]
38. Railroad bridge - [redacted] believed it was of reinforced concrete; [redacted] based [redacted] on [redacted] familiarity with railroad bridge construction practices since 9 September 1944.
39. Platforms - These were three platforms, 200 or more m long, on each of which were newspaper and delicatessen stands and water fountains. A tunnel ran underneath the tracks connecting these platforms.
40. Tracks - This was a passenger through-track for trains running from VARNA to SOFIA. It was also used for limited freight train locomotive maneuvering.
41. Tracks - This was a passenger through-track for trains running from RUSE to PODKOVA. Same as Item 40.
42. and 43. Tracks - These were passenger through-tracks for trains running from PODKOVA to RUSE. Same as Item 40.
44. Track - This was a passenger through-track for trains running from SOFIA to VARNA. Same as Item 40.
45. Tracks - These were approximately 15 freight tracks.
46. Classification yard - [redacted]
47. Freight yard - This yard was approximately 1 km from the station. [redacted]
48. Freight yard for sugar factory [redacted]

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Continuation of Legend to Annex C

49. Main classification yard - This yard had been under construction since 1954 or 1955, and [redacted] it was to be completed in 1959 and was to include the Samovodene station. When it was completed, the classification yard of Item 46 was probably to be torn up or left as a reserve yard.
50. Forwarding tracks (pomoshthno raspredelitelno otpravno razvitiye) - These were 500 to 600 m long.
51. Planned site of underground water tank - Plans were drawn in 1957 for this tank, which was to be built in 1958. It was to be of reinforced concrete with a 500-cu m capacity and was to be connected to the existing water lines.
- [redacted] Forty fireplugs, 50 mm in diameter, were to be installed and tied into the main lines of this reservoir. The estimated cost for the entire projects was 600,000 to 700,000 leva.

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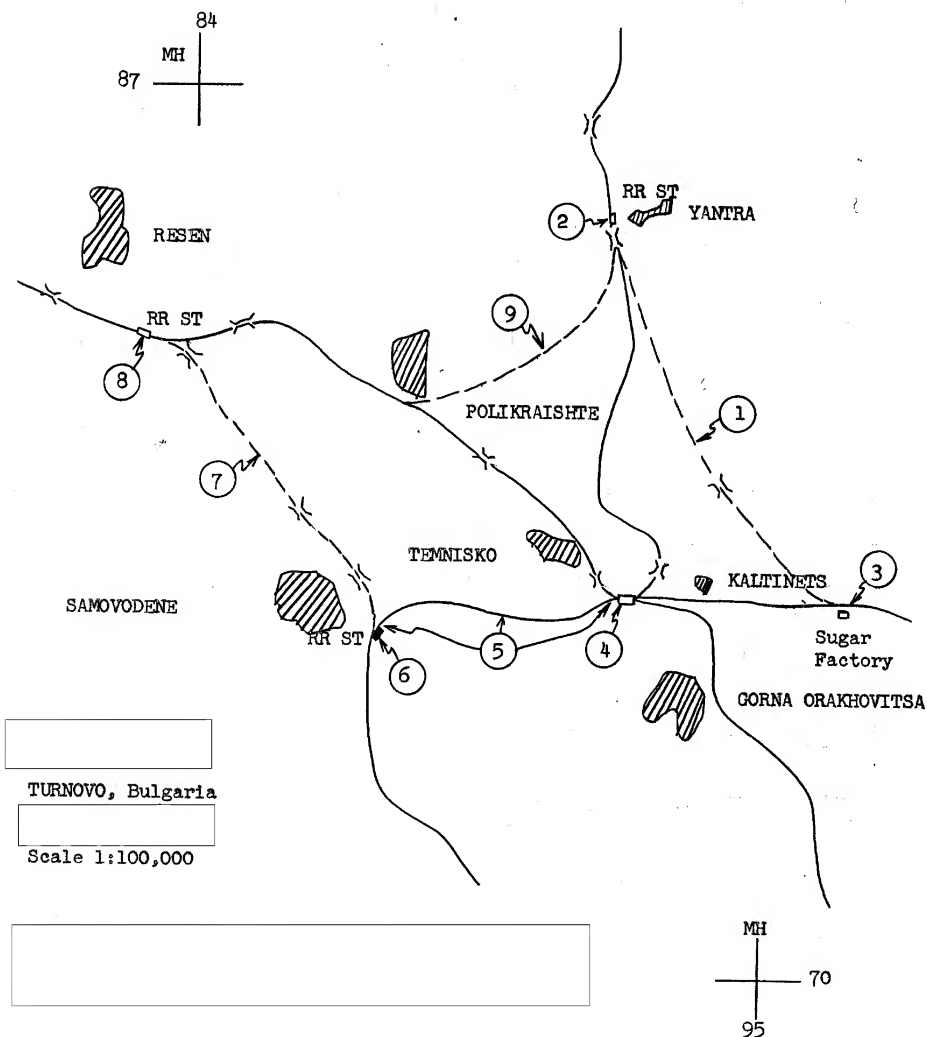
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ANNEX D

MAP OVERLAY OF RAILROAD ROUTES IN THE VICINITY OF GORNA ORAKHOVITSA AND CONNECTING BY-PASS LINES RECENTLY CON-
STRUCTED AND UNDER CONSTRUCTION. (BULGARIA)



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Legend to Annex D

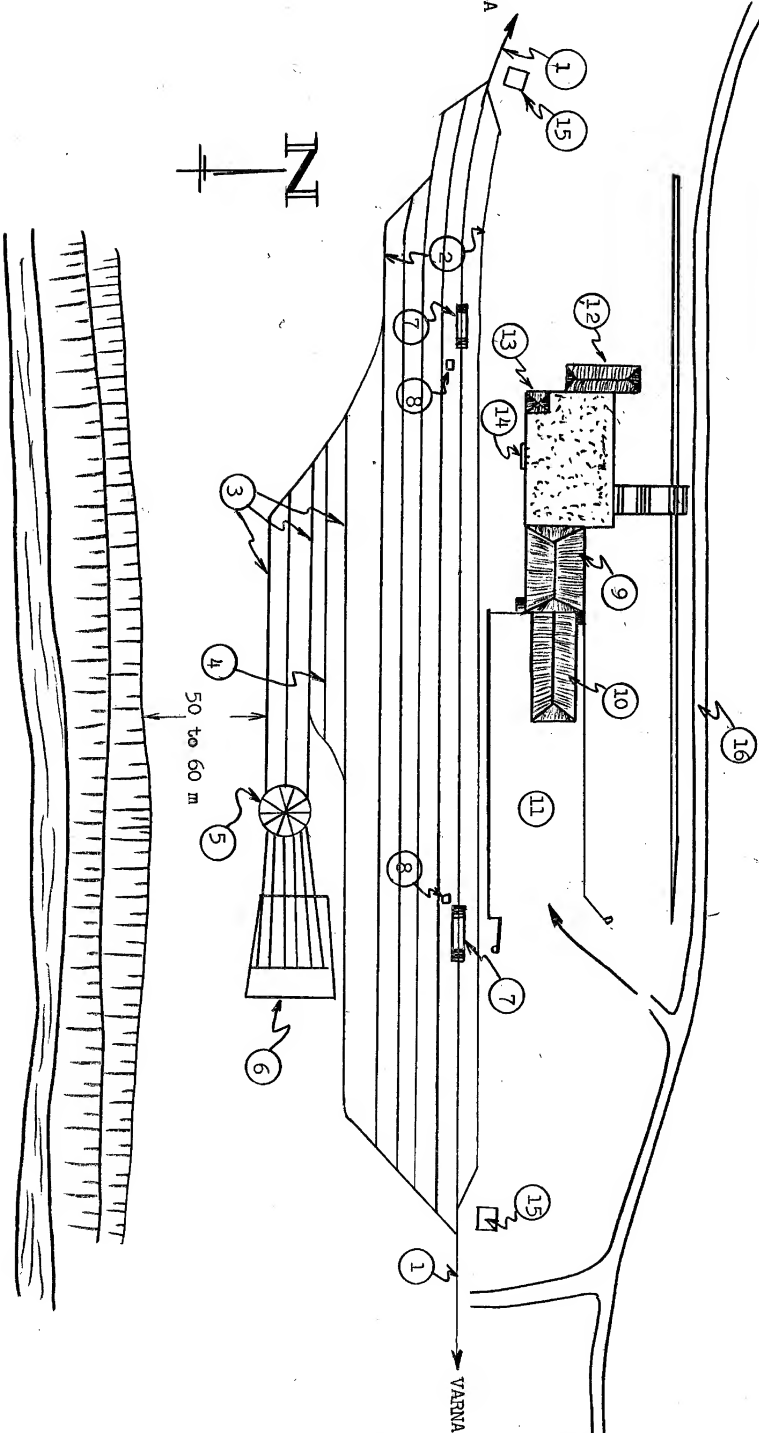
1. Track - This was a tie-in track between the VARNA-RUSE and the standard-gauge, single-track railroad lines RUSE-GORNA ORAKHOVITSA. It enabled trains on the two lines to by-pass the Gorna Orakhovitsa railroad station. Construction of this tie-in line was begun in 1949 and completed in 1951.
2. Yantra railroad station.
3. Factory - This was a sugar factory 3 km from KALTINETTS.
4. Gorna Orakhovitsa railroad station.
5. Proposed site for classification yard - This yard was to be built under the project mentioned in paragraph 2. d. 25X1
6. Samovodene railroad station. 25X1
7. Track under construction - This was a tie-in track between the SOFIA-VARNA and RUSE-KURDZHALI-PODKOVA railroad lines. This was to be a standard-gauge track; not certain whether it was to be single or double. Construction was under way in 1955; it had not been completed in 1958. The proposed date of completion was 1958. 25X1
8. Resen railroad station.
9. Track - This was a tie-in track between the SOFIA-VARNA and GORNA ORAKHOVITSA-RUSE railroad lines so that trains on these lines could by-pass the Gorna Orakhovitsa railroad station.

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GORNA
ORAKHOVITSA



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ANNEX E
SKETCH OF ASENVO RAILROAD STATION, BULGARIA

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Legend to Annex E

1. Main track - This was a standard-gauge single-track railroad line, SOFIA-GORNA ORAKHOVITSA-KOLAROVGRAD-VARNA.
2. Body tracks - [redacted] there were six of these body tracks, all standard gauge and approximately 600 m long. 25X1
3. Sidings - These tracks were used by locomotives for maneuvering. Water and coaling facilities were in this area.
4. Siding - Approximately 20 locomotives were kept as a reserve on this track. This reserve complement of locomotives, which were not used for normal runs, was common to all larger depots.
5. Roundhouse - [redacted] 25X1
6. Locomotive depot [redacted]
7. Cleaning pits - Here diesel and steam locomotives were cleaned. There were more cleaning pits [redacted] 25X1
8. Water crane - This was connected to a water tank, location unknown. There were no pumps at this point. There were other water points in this station, [redacted] 25X1
9. Station building - This was a 3-story, cream-colored, stuccoed brick building with a red-tile gabled roof. It was approximately 15 x 10 m. On the ground floor were the offices of the stationmaster and dispatcher, the control tower, the ticket office, and the waiting room; on the second and third floors were the quarters of the office personnel.
10. Freight building - This was a 1-story, cream-colored, stuccoed brick warehouse, 25 to 30 x 15 x 5 to 6 m, with a red-tile gabled roof. It had sliding wooden doors, approximately 3 m high and 2.5 m wide, on both sides.
11. Loading ramp - It was 150 x 30 x .9 m and of compacted crushed rock.
12. Unidentified building - This was a 1-story, stuccoed brick, cream-colored building, about 10 x 4 m, with a red-tile gabled roof.
13. Washrooms.
14. Drinking fountains.
15. Control towers - These were 1-story, brick, flat-roofed buildings, 3.5 x 3.5 x 3 m.
16. Macadam road.

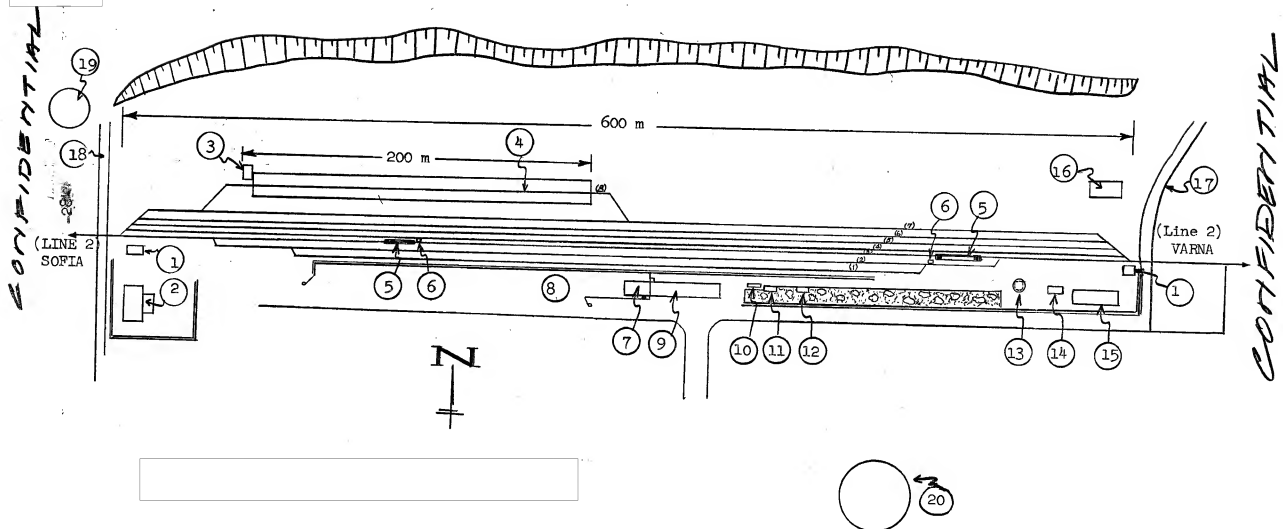
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ANNEX F
SKETCH OF TURGOVISHTA RAILROAD STATION, BULGARIA

25X1

NOTE: Numbers in parentheses are track numbers



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25X1

Legend to Annex F

1. Switch control towers - These two towers were each 3.5 x 3.5 x 4 m and of the type usually constructed in Bulgaria. 25X1
2. Living quarters and tool shed - The quarters building was a 3-story, stuccoed brick, cream-colored building, 20 x 10 m with a red-tile gabled roof. The rail maintenance supervisor, the track watchman, and a few permanent maintenance workers lived in this building with their families. The tool shed was a 1-story building, 10 x 6 m, and attached to the quarters building. These buildings were used by the rail maintenance section crew, which was responsible for the maintenance of the Webel-Levski sector.
3. Coal and wood storage area office - This was a 1-story stuccoed brick building, 6 x 3 m.
4. Shelter for coal and wood - This shelter, 200 x 20 x 7 m, was merely a roof supported on wooden posts.
5. Two cleaning and ash pits - These pits were 30 x 1.2 m and were on track 3. There were four cleaning and ash pits at this station. 25X1
6. Water cranes - Water from the old water tower (Item 14) was fed into the locomotives at these two points. There were two other water points at this station. 25X1
7. Freight station building - This building, a 1-story, stuccoed brick, cream-colored building, 15 x 10 m with red-tile gabled roof, contained the freight offices and a warehouse.
8. Loading ramp and scale - The loading ramp was 150 x 20 m x 90 cm, with stone walls. The area between the walls had been filled with crushed rock and then rolled. There was a scale built into track 1 near this ramp.
9. Station building - This was a 2-story, cream-colored, stuccoed brick building, 18 x 10 m, with a red-tile gabled roof. It housed on the ground floor the stationmaster, the dispatcher, ticket offices, the waiting room, and a small restaurant. Quarters for the stationmaster's and the dispatcher personnel's (four) families were on the second floor.
10. Drinking fountain.
11. Latrine.
12. Post office - This was a 1-story building, 4 x 4 m.
13. Water tower - The tank of this tower was reinforced concrete, enclosed in an 80-cm-thick brick insulating jacket. Its capacity was 150 cu m; its 24-hour capacity was 500 cu m. It had two electric pumps, one in operation at all times. There was one diesel pump for emergencies only. There were three more pumps at the river south of the station, which was the source of the water. The tower was built in 1951 or 1952. In 1957, 25X1

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25X1

Continuation of Legend to Annex F

plan to build, in 1958, a dam about 4 km upstream and to lay pipes from a reservoir below the dam to the water tower so as to feed the tank by gravity flow. [redacted]

25X1

14. Old water tower - This tower was about 18 x 10 x 6 m and had a steam-powered pump. Its capacity was 50 cu m; its 24-hour capacity was 200 cu m. As of 1958, it served as a stand-by tower.
15. Quarters for station switchmen and track personnel - This was a 2-story, cream-colored, stuccoed brick building, 8 x 12 m, with a red-tile roof.
16. Quarters and office of the regional rail maintenance supervisor - This was a 2-story, cream-colored, stuccoed brick building, 10 x 6 m, with a red-tile gabled roof. The supervisor was responsible for the sector starting 3 to 4 km east of KOCHOVO at UTM MH-8485 to a point 5 km east of DRALFA at UTM MH-5498. He had about seven section supervisors subordinate to him.
17. Third-class road from TURGOVISHTA to BREG.
18. Second-class road from TURGOVISHTA to TRAPISHTA.
19. Machine tractor station [redacted] - Approximately 1 km north of TURGOVISHTA at UTM MH-635900, this station was built in 1954 or 1955. It consisted of 10 hangar-type structures, each 45 x 15 m, housing all tractors, combines, and trucks of the Turgovishte Okoliya, and repair and maintenance shops for the same machinery. Quantity of machinery unknown.
20. State POL storage depot - The oil stored in this depot was for civilian use. There were approximately 10 tanks, each with a capacity of 20 cu m. The depot was built in 1952 or 1953. [redacted]

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Legend to Annex G
(For Annex G, See Attached Envelope.)

1. Through track - This track was used by trains running from VARNA to SOFIA.
2. Maintenance supervisor's quarters and tool shed - The building closer to the road was the supervisor's quarters; the other, his tool shed. They were both 1-story brick buildings with red-tile gabled roofs. This supervisor was responsible for the Kosovo-Mutnitsa sector of Line 2 and for the Kaspichan-Pliska sector of the Kaspichan-Ruse line.
3. Three turnouts.
4. Loading ramp - This ramp was 200 m long and .9 m high. The two dead-end spurs beside the ramp were used for loading.
5. Warehouse - This was a 1-story, stuccoed brick, cream-colored building, 30 x 15 m, with a red-tile roof.
6. Quarters for transient railroad personnel - These were two, 1-story stuccoed brick buildings, 10 x 8 m.
7. Ash pit and water tower - There were approximately 20 of each of these at various points throughout the station area (exact locations unknown).
8. Infirmary, doctor's office, and quarters - This was a 2-story building, 8 x 6 m. The infirmary and the doctor's office were on the first floor; the quarters were on the second floor.
9. Drinking fountain, latrine, and garbage disposal incinerator.
10. Station building - This was a 2-story, stuccoed brick building, 50 x 15 m, with a red-tile gabled roof. It had an awning in front. In the west wing of the first floor were the offices of the stationmaster, his assistant, and the eight dispatchers (two on duty at all times), as well as the ticket office. The switches and signals were controlled from the office of the dispatchers. In the middle of the first floor were the waiting room and the restaurant. In the east wing of this floor was the post office. Quarters were on the second floor.
11. Drinking fountain.
12. Office of the unidentified military unit assigned to the station - This unit (number unknown) was subordinate to the headquarters at the Gorna Orakhovitsa station. This was a 1-story building, 10 x 6 m.
13. Railroad telephone central - This central contained an automatic switchboard (details unknown). Built in 1948 or 1949, it was a 2-story, gray-stuccoed brick building, 12 x 10 m, with a red-tile roof. a telephone technician lived in this building. In addition there was an operator on duty who handled the line to railroad stops and railroad crossings.
14. Quarters for railroad personnel - Built in 1950 or 1951, this was a 3-story, stuccoed brick building, 12 x 10 m, with a red-tile roof.
15. Quarters for railroad personnel - This was a 1-story building, 60 to 70 x 8 m.

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16. Railroad bridge - This was a steel girder, deck-type bridge, approximately 4 m long and 10 m wide, with stone abutments. Two normal-gauge tracks passed over it.

17. Track to VARNA.

18. Dead-end spur - This track, 5 to 6 km long, led to the ash pit. It was also used by locomotives for executing their maneuvers.

19. Transloading spur - It was normal gauge.

20. Two elevated narrow-gauge tracks - Cars on these tracks were level with those on the normal-gauge spur. Transloading was done from these tracks, which were approximately 300 m long.

21. Coal yard - A diesel crane on rails loaded locomotives on both narrow- and normal-gauge tracks. The capacity of the crane was 500 kg. The stockpile consisted of lignite and brown coal from DIMITROVO, amount unknown.

22. State reserve coal stockpile - This consisted of large layers of coal briquettes covered with wooden boards. Provisions had been made for ventilation. [redacted] there was at least 10,000 cu m of coal stockpiled here, which was for use only in case of war. There were also state reserve stockpiles of rails and ties [redacted]

25X1

25X1

25X1

23. Building - This was a 1-story brick building, 65 x 20 m, with a red-tile roof. It contained the messhall, warehouses, and various offices.

24. Living quarters for railroad personnel - These were six 2- or 3-story houses, 25 x 12 m.

25. Grain silos.

26. Water tower - It was 20 m high and had a capacity of approximately 150 cu m. About 500 cu m of water could be pumped through it in 24 hours. Its pumphouse contained one diesel and two electric pumps; its source of water was unknown. In 1957, a project was initiated at Transproekt to build, in 1958, a new underground water reservoir, with a capacity of 500 cu m, on the high ground northwest of the station. It was to be gravity fed.

27. Eight smurs to locomotive shops - These were each approximately 100 to 150 m long.

25X1

28. Locomotive shops - Maintenance and repair shops were located here.

29. Storage yard.

30. Standard-gauge track to RUSE.

31. "Y" track - Its capacity was one locomotive and two cars.

32. Approximate location of the station's underground command post.

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25X1

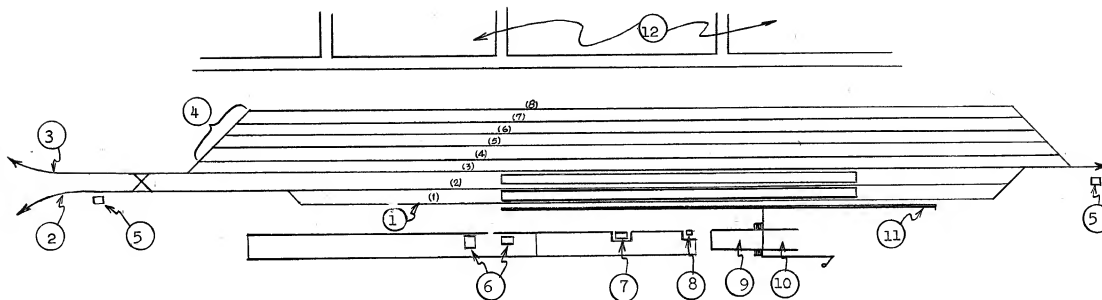
Continuation of Legend to Annex G

33. Quarters and tool shed - These were for use by the narrow-gauge-line maintenance section. There were two 1-story buildings, 8 x 6 m; one served as quarters for the section, the other as the tool shed.
34. Narrow-gauge line to TODOR IKONOMOVO and BOZHIDAR - There was ballast beneath the track of this line.
35. Highway 4, SOFIA-VARNA.
36. Locomotive shops for narrow-gauge line - All maintenance and repair of locomotives on the narrow-gauge line were done here.
37. Approximately seven tracks - Each was 50 to 60 m long. Possibly there was a turntable here.
38. Two narrow-gauge spurs - These led to the water and coaling points and to the cleaning ditches and ash pits.
39. Approximately five narrow-gauge tracks - These were approximately 500 m long.

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ANNEX H
SKETCH OF SINDEL RAILROAD STATION, BULGARIA



NOTE: Numbers in parentheses are track numbers.

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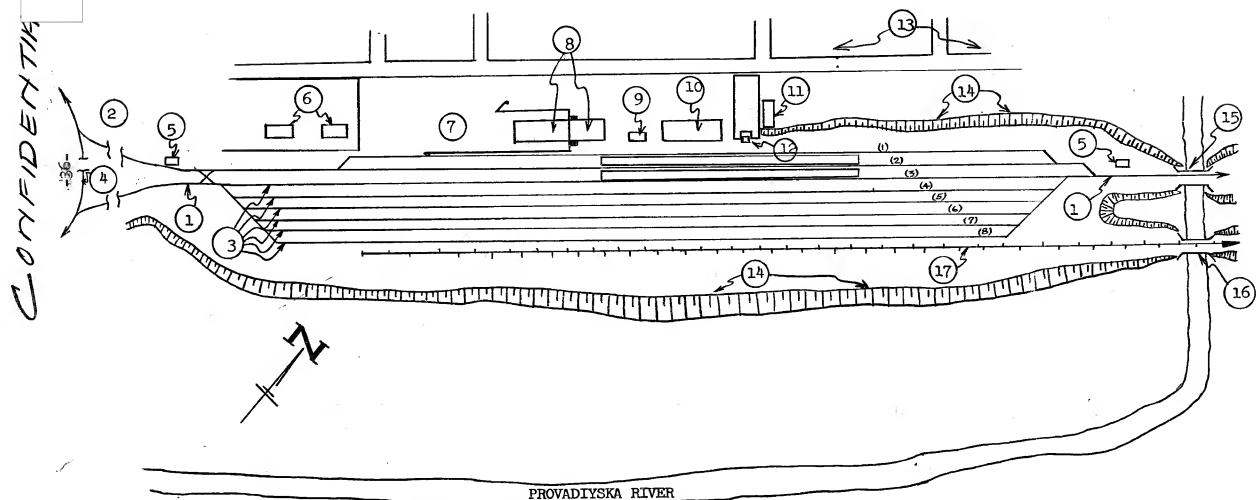
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Legend to Annex H

1. Body track - This was 500 to 600 m long and was used for loading and unloading freight trains.
2. Main track - This was a standard-gauge line, 500 to 600 m long, used by trains running from VARNA to POLYANOVGRAD.
3. Main track - This was a standard-gauge line, 500 to 600 m long, used by trains running from SOFIA to VARNA.
4. Five body tracks - These were used by freight trains.
5. Switch control tower - Switches were controlled manually from this tower. It was used only in case of emergency.
6. Maintenance supervisor's office - These were two 1-story buildings 6 x 8 m. They were used by the railroad maintenance supervisor as his office, tool shed, and quarters.
7. Tool shed.
8. Drinking fountain - This fountain was pump-fed.
9. Station building - This was a 2-story building, 30 x 12 m. On the ground floor were the stationmaster's office, dispatcher's office, ticket office, and waiting room. In one of the rooms on the second floor was an auxiliary telephone relay station; the other rooms were used as quarters for station personnel. Seven to nine employees were assigned to this station.
10. Freight station - This was a 1-story building, 20 x 12 m.
11. Loading ramp - This measured 100 to 150 x 20 m.
12. Newly-constructed civilian housing area.

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ANNEX I
SKETCH OF RAZDEINA RAILROAD STATION, BULGARIA



NOTE: Numbers in parentheses are track numbers.

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Legend to Annex I

1. Main track - This was a standard-gauge line, approximately 600 m long, used by trains running from SOFIA to VARNA.
2. Main track - This was a standard-gauge line, approximately 600 m long, used by trains running from KARDAM to VARNA.
3. Six body tracks - These were approximately 600 m long.
4. Tie-in line between Line 2 and the Kardam-Varna railroad line.
5. Switch control tower - This served as a stand-by means of switch control, to be operated manually.
6. Quarters for railroad personnel - There were two 2-story, stuccoed brick buildings, 6 x 8 m, with red-tile roofs, built in 1954.
7. Loading ramp - Built in 1951 or 1952, it measured 100 to 150 x 20 m.
8. Freight station - This was a 1-story building, 60 x 15 m; the northeast section, 15 to 20 x 15 m, was used for offices.
9. Newsstand and snack stand.
10. Station building - This was a 2-story building, 40 x 15 m. On the ground floor were the stationmaster's office, dispatcher's office, ticket office, and waiting room; on the second floor, which was built in 1954, were quarters for the railroad personnel. Approximately 10 men were assigned to this station.
11. Privately-owned building.
12. Fountain.
13. Privately-owned houses.
14. Fill - This fill was 1 to 2 m high and built on a marsh.
15. Railroad bridge - One track passed over this steel girder, deck-type railroad bridge, 4 m long, which spanned the Provadiyska River. Its abutments were stone and its approaches were on fills.
16. Wooden railroad bridge - A narrow-gauge line passed this bridge.
17. Narrow-gauge line - There was no ballast under the tracks of this line. It was about 4 to 5 km long and led to a brick and tile factory. The equipment used on this line was the property of and maintained by the factory.

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Legend to Annex J

(For Annex J, See Attached Envelope.)

1. Passenger station - There were six dead-end tracks. Tracks 1 through 5 were approximately 250 m long. Track 1 was used by trains traveling to SOFIA via GORNA ORAKHOVITSA. Track 2 was a receiving track used by trains traveling from SOFIA via GORNA ORAKHOVITSA; occasionally, it was used by trains from other stations. Track 3 was used by trains traveling to SOFIA via POLYANOVGRAD and also as a receiving track for trains traveling from TOLEBUKHIN and POLYANOVGRAD. Track 4 was used by trains traveling to KARDAM via TOLEBUKHIN and by local trains traveling to DEVNYA. Track 5 was used by trains traveling to POLYANOVGRAD and DEVNYA. During the winter a locomotive used for warming up trains in the station was parked at the end of this track. Track 6 was approximately 100 m long and was used by special trains only, such as those carrying foreign delegations, which were guarded by military personnel. This station had three sheltered ramps 50 cm high and 100 m long.
2. Passenger station building - On the ground floor were the following offices and rooms: offices of the stationmaster, dispatcher, train inspector, trainmaster, brakemen, conductors, administrative personnel, baggage service, and tickets; the various rooms included the baggage room, conference room, waiting room, restaurant, and railroad post office (for official mail only). On the second floor were quarters for the stationmaster and other personnel.
- 2a. Watchtower - This tower, 8 x 8 m, had two stories and was on top of the passenger station building. On the lower floor were the offices of the station Party secretary and part of the offices of the Professional Workers' Committee. On the upper floor were the rest of the Workers' Committee offices and an exchange of a special communications network, called "Preko." This exchange was used by the Movement Control Section, subordinate to the regional Railroad Inspectorate [redacted] in GORNA ORAKHOVITSA. The exchange had direct lines to all stations in the region, and Source believed also to the dispatchers' office in the Sofia Railroad Station. The Preko exchange area was off limits to unauthorized personnel.
3. Building - This was a 3-story U-shaped building, 50 x 15 m; its two wings were 25 x 15 m. It contained the offices of the railroad maintenance section, the telephone, telegraph, and electric service, the railroad hospital, restaurant, and transient quarters.

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The railroad maintenance section was responsible for the Varna region and had approximately 60 men, including representatives from the several administrative and technical services.

The TEOI section was responsible for telephone and telegraph services at this station and had approximately 10 direct lines, two to each of the following cities: KOLAROVGRAD, POLYANOVGRAD, KASPICHAN, TOLEBUKHIN, and SINDEL. In addition, it had a line of magnetic phones connected in series, which was an automatic exchange tied into the city lines and the harbor exchange. There were approximately 40 men employed in this section, including maintenance personnel.

The hospital had a 20-bed capacity. There were no facilities for surgery, but the other medical departments were represented. [redacted] In the basement of the hospital was a decontamination station capable of decontaminating 24 persons per hour; it included six showers, clothing rooms, dressing rooms, a doctor's office, and 10 beds.

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Continuation of Legend to Annex 4

4. Customhouse - This was a 3-story building, 50 x 50 x 12 m, which contained the offices of the Varna port authorities and, on the first and second floors of the northwest section (Item 4a), the offices of the Varna district construction section of the Ministry of Transportation and Telecommunications, in which approximately 50 men were employed. New construction for this district was handled in this building.
5. Garden.
6. Freight station - There were four freight tracks (one an end-loading track) used for loading and unloading, and a macadam loading ramp 200 m long.
7. Freight tracks - These three tracks, 450 m long, were used by trains carrying coal, wood, and construction materials to be used in VARNA. Other materials, which did not need to be loaded from a ramp, were also loaded or unloaded here. This area was paved with cobblestones.
8. Dead-end spur - This spur was 300 m long; there was a scale for weighing here.
9. Freight office - This was a 1-story building, 20 x 15 m, in which 25 men were employed.
10. Building - This was a 1-story building, 80 x 15, with a red-tile gabled roof.
11. Brick wall - This wall was 1 m tall. There was wire mesh 1 m high between the brick columns along the top.
12. Iron gates - These were 4 m wide.
13. Street.
14. Military loading area - One track, approximately 300 m long, and a loading ramp, 150 m long, were here. This area was used primarily from March to September when military units from all parts of the country came to the training area south of the harbor of Varna. Even though it was a military ramp, it was considered a part of the freight station (Item 6).
15. Dead-end spur to oil refinery - Cooking oil was refined here from sunflower seeds.
16. Two tracks, 100 m long, to uranium storage area - There were two ramps here also, one on each side of the tracks.
17. Uranium warehouse.
18. Guardhouse - This was a brick building, 20 x 10 x 4 m, which housed a 30-man detachment of the Internal Security Forces, whose mission was to guard the uranium warehouse (Item 17).
19. Classification yard - This yard was at least 1 km long and had approximately 30 tracks. Switches were controlled semiautomatically.
20. Switch control tower - This tower measured 3.5 x 3.5 x 12 m. Some of the switches in the classification yard (Item 19) were controlled from this tower by electricity.

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Continuation of Legend to Annex I

21. Locomotive service facilities area - In this area were the engine house (Item 22), the turntable (Item 24), the administrative offices for locomotive servicing (Item 23), ash pits, water columns, and coaling facilities. Water was received from the tanks near the old station (Item 33) and from the city mains. In 1957, a project, to be carried out in 1958, was approved for bringing water from a spring 18 to 20 km northwest of VARNA to be used here and also by harbor facilities. Its estimated cost was 1.5 to 2 million leva.

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22. Engine house - There were 15 tracks, several repair shops (2 or 3 buildings), and approximately 50 men employed here. It had facilities for repairing 15 locomotives simultaneously.
23. Locomotive depot administration building - This was a 3-story building, 40 x 15 m, in which the chief of the depot, his assistant, and approximately 90 employees worked, including planning, bookkeeping, statistical, and other administrative personnel. Besides these employees, the engineers and foremen had their offices here. On the first floor were mess and bathing facilities for the engineers and the foremen.
24. Turntable - This turntable had 10 tracks, where locomotives were cleaned and changed tracks.
25. Track for locomotives held in reserve - About 20 locomotives were parked on this track.
26. Approximately 10 body tracks - They were 100 m long and were used by locomotives for executing maneuvers and for taking on water and coal. The water was received from the city mains. Coal was loaded by cranes on rails.
27. Railroad soccer stadium - Its capacity was 15,000 persons.
28. Quarters for railroad personnel - There were six 2-story buildings, 8 x 6 m.
29. Maintenance section shops - This area was fenced off and contained approximately 10 small shops, including woodwork, tin, paint, lathe, mechanic, blacksmith, and planning shops.
30. Watchman's shed - This shed measured 3 x 4 m. Formerly there was a grade crossing at this point.
31. Watchman's quarters and tool shed - There were either one or two 2-story buildings.
32. Three receiving tracks for freight trains.
33. Former station building - As of 1958, this was used only as the Varna railroad stop; only local passenger trains stopped here. One man at this stop sold tickets. This was a 1-story brick building, 30 x 15 m.
34. Siding - This was for a textile factory and was approximately 100 m long.
35. Line 2.

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Continuation of Legend to Annex 4

36. Decontamination station - This station consisted of two tracks and ramps (Item 38) and one building (Item 37).
37. Decontamination building - This was a 2-story building, 15 x 8 m, put up in 1958. Source saw the plans for its construction, which contained devices for decontaminating railroad cars of chemical agents, such as lewisite, in the event of CBR warfare. [redacted] from 1954 to 1956, similar decontamination stations were built at other important railroad stations [redacted]
38. Two tracks and two ramps - The ramps were 150 m long, with outlets for steam and other chemical agents.
39. Y-track - This was used by passenger trains to turn around.
40. Spur for Vasil Kolarov factory and for the Korolovak Shipbuilding Yard - The latter was also known as Yard Number 2 of the Georgi Dimitrov Shipbuilding Enterprises.
41. Spur for thermoelectric power plant.
42. Spur for Neptune Shipbuilding Yard - The yard was also known as Yard Number 2 of the Georgi Dimitrov Shipbuilding Enterprise.
43. Two spurs for the shops on the repair dock.
44. Two spurs - These were approximately 200 m long and were used for the POL area.
45. Spur for the sandy beach called Asparukhov Val.
46. Spur - This was used by the Varna district construction section of the Ministry of Transportation and Telecommunications, which made cement blocks, measuring 20 cu m.
47. Two or more tracks - These were for use by the naval base.
48. Spur for wheat quay - As of 1958, coal and wood were loaded here.
49. Spur for Stoyanka quay - Coal and wood were loaded here.
50. Spur for livestock cars - This livestock was for export.
51. Shops and offices of the Georgi Dimitrov Shipbuilding Yard Number 1.
52. Several body tracks for above yard (Item 51).
53. Spur to warehouses of the Varna district construction section - It was also used to haul steel trash from the factory and to haul steel to the interior.
54. Highway overpass - The railroad passed under a highway at this point. The overpass span rested on two pillars. Command post shelters had been built into its abutments. In wartime, train operations would be carried out from these shelters, which contained enough provisions to sustain several persons for 48 hours.
55. Asparukhov bridge.
56. Control cabin for the bridge (Item 55).
57. Tracks for Varna harbor.

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Legend to Annex K
(For Annex K, See Attached Envelope.)

1.

2. Map location of Kolarovgrad railroad station.
3. Railroad Line 2, SOFIA--VARNA.
4. Main road to PRES LAV.
5. Normal-gauge spur to brewery in KOLAROVGRAD.
6. Railroad Line 2, SOFIA-VARNA.
7. Guarded railroad crossing - This was controlled by an attendant upon signal from the Kolarovgrad station.
8. Highway 4 to VARNA.

9.

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10. Highway 9 - The information contained under Item 9 also can be applied to this highway.
11. Stone arch bridge - This bridge was at the bottom of a ravine, and was 20 to 25 m long. Under the bridge arch, the vertical and horizontal clearances were about 4 m. On top of the bridge was a fill, about 4 to 5 m high and 50 to 60 m long; the slope of the fill was 1:2. The rail track was built on top of this fill.
12. Guarded railroad crossing - There were no fill constructions or cuts. A man, permanently assigned to this crossing and living in a house nearby, manually lowered the barriers upon receiving a bell signal from the Kolarovgrad or Ivanski stations.
13. Guarded railroad crossing - Same as Item 12.
14. Dibich Railroad Stop - There were two tracks, approximately 500 m long, and a loading ramp, approximately 100 m long, at this railroad stop.
15. RADKO DIMITRIEVO.
16. Radko Dimitriev railroad stop - It had two tracks, approximately 500 m long.
17. Railway bridge - This was a steel girder deck-type bridge, 4 to 5 m long between the faces of the stone abutments. Clearance under the bridge was 4 m.
18. Guarded railroad crossing - Same as Item 12.

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Continuation of Legend to Annex K

19. Ivanski railroad station - It had three tracks, approximately 600 m long. There were no water or coaling facilities at this station.
20. Railway bridge - This was a 3-span steel Parker-truss bridge. Its length was approximately 70 m; the center span was approximately 30 m long. It had two stone masonry pillars and two stone abutments. Clearance under the bridge was 7 to 8 m; overhead clearance was unlimited. It was guarded by military personnel.
21. Stone arch railway bridge - On top of the bridge was an earth fill 2 to 3 m high and 10 to 15 m long, whose sides sloped at a ratio of 1:2. The track was built on the fill. The vertical and horizontal clearances under the bridge were approximately 3 m.
22. Railway bridge - This was of the same type as that described in Item 21.
23. Guarded railroad crossing - This was of the same type as that described in Item 12 except that bell signals came from the Smedovo and Ivanski stations.
24. Smedovo railroad station.
25. Railway bridge - This was a stone girder deck-type bridge.
26. Railway bridge - This was of the same type as that described in Item 21.
27. [REDACTED]
28. Two railroad bridges - These were of the same type as that described in Item 25. [REDACTED]
29. Railroad bridge - This was of the same type as that described in Item 21.
30. Belbreg railroad stop - This was formerly a station; in 1951 or 1952 it became a stop. It had three tracks, approximately 600 m long, and a loading ramp, 150 m long. There were two or three switchmen assigned to this stop, who received their signals from the Smedovo railroad station.
31. Landslide area - This area began at the switches at the east end of the Belbreg railroad stop and extended for approximately 100 m. The railroad line passed through a cut here of light clay, which had not been paved. During the rainy season, the south side gave way and clay covered the track. Every fall and spring hundreds of workers were employed in clearing this track. No attempt was made to stabilize the sides of this cut.
32. Zhelad railroad stop - There were no additional tracks.
33. Arkovna railroad stop - It had two tracks, 600 m long, and a loading ramp, 100 m long.
34. Railway bridge - This was a stone girder deck-type bridge.

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Continuation of Legend to Annex K

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35. Landslide area - Here the track passed through a cut approximately 50 m long and 40 m high, whose sides sloped at a ratio of 1:2. The soil was sandy, and there were many large rocks, which washed down onto the track during the rainy season. A watchman was permanently assigned to this area; his main task was to signal trains to stop if a large rock had rolled onto the track. He lived in a small shack nearby.
36. Partizani railroad stop - It had two tracks, approximately 600 m long.
37. Railway bridge - Data on this bridge were the same as on that of Item 21 except that the fill was 1 to 2 m high and 10 m long.
38. Railroad line POLYANOVGRAD-RAZDELNA - This was the same as the one described in Item 9 in the first part of the legend to Annex K.
39. Polyanovgrad railroad station - [redacted] Water, coaling, and freight facilities were located at this station, which was also a locomotive depot. [redacted]
40. Continuation of Line 3 to ZIMNITSA.
41. Line 1 to BURGAS.
42. Tie-in line [redacted] a tie-in to the line to ZIMNITSA existed somewhere in this area; [redacted]
43. Vulchin railroad stop - It had two tracks, approximately 500 m long, and a loading ramp, approximately 100 m long.
44. Lozarevo railroad station - It had 3 or 4 tracks, 600 m long, and a loading ramp, 150 m long.
45. Highway PODVIS-LOZAREVO-POLYANOVGRAD - This was a waterbound macadam road, approximately 6 m wide.
46. Podvis railroad station - It had 3 or 4 tracks, approximately 600 m long, and a loading ramp, 150 m long. This was the highest elevation point on the line. The only significant grade was between the Zavet station (Item 56) and the Lozarevo station (Item 44). The maximum grade on this section was 2.3 percent.
47. Roads.
48. Petar Baron railroad stop - It had two tracks, approximately 500 m long, and a loading ramp, 150 m long. There were no water or coal facilities.
49. Zaichari railroad stop - It had two tracks, approximately 500 m long. There were no water or coaling facilities.

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Continuation of Legend to Annex K

50. Railway bridge - This was a stone arch bridge, approximately 15 to 20 m wide. On top of the bridge was an earth fill, 40 to 50 m long and 5 to 6 m high; it was covered with vegetation. The slope of its sides was 1:1.5. Vertical and horizontal clearances under the bridge were 5 to 6 m.
51. and 52. Railway bridges - These were the same as those described in Item 50.
53. Spring - This spring flowed out of a rock formation. In 1955, the stream bed was stabilized with concrete. The stream fed two reservoirs (Item 55).
54. Underground water pipes - These pipes, buried at least 1.2 m, were 6 cm in diameter and the length of the line was 5 km. The line was laid through a wooded area, part of which had been cleared away when the line was laid. It was possible to see the route of the line from the air.
55. Two underground water reservoirs - The spring (Item 53) flowed through the pipes (Item 54) into these reservoirs, which were built at the same time as the line. Two other streams (locations unknown) also flowed into them. The reservoirs were approximately 30 m higher than the tracks; the water was gravity-fed to the station water cranes. The capacity of each reservoir was 100 cu m. The 24-hour capacity of both was 600 cu m.
56. Zavet railroad station - It had four tracks, 600 m long, and a loading ramp, 150 m long. There were three water points and coal storage reserve facilities.
57. Railroad bridge - This was a 3-span steel Parker-truss bridge, guarded by military personnel.
58. Liuliakovo railroad stop - It had two tracks, 500 m long. There were no water or coal facilities.
59. Tunnel - This tunnel was approximately 1 or 2 km north of the Liuliakovo railroad stop; Source's location on the overlay was only approximate. The tunnel was approximately 400 to 500 m long. both its ends were lined with stone. There was no ventilating system. The tunnel was dry.
60. Listets railroad stop - It had two tracks, 500 m long.
61. Railroad bridge - This was of the same type as that described in Item 20 of the legend to Annex K. It spanned the Kamchiya River.
62. the line ran along the south bank of the Kamchiya River. there were many cuts along this section, and approximately 2 km east of the Listets railroad stop (Item 60), there was a railroad bridge over the Kamchiya River. except for a curve 800 m south of the Daskotna station, the alinement of this section was generally straight.

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Continuation of Legend to Annex K

63. Daskotna railroad station - It had 3 or 4 tracks, 600 m long. There were no water or coaling facilities.
64. [redacted] at this point there was a rigid concrete-frame railroad overpass, which spanned a highway. He had no further information.
65. Slide area - The tracks were frequently buried by slides in this area, which was approximately 3 km long. In spring 1956, 1 km of the track was buried under about 10,000 cu m of earth and rock. A new track was built 10 or 15 m farther west. The area was still dangerous. Maximum traveling speed was 5 km per hour.
66. Railroad bridge - This was a 3-span steel Parker-truss bridge, approximately 60 m long. One of the spans was over a highway, the other two over a river. The lengths of the spans were 15, 30, and 15 m. The clearance between the bridge and the river was 10 m; between the bridge and the highway, 6 to 7 m. Military personnel guarded this bridge.
67. Karavelovo railroad stop [redacted]
68. Field telephone - This was used to notify nearby stations of dangerous conditions.
69. Slide area - At this point the railroad passed through a cut, approximately 150 m long, of rock soil. The top of the northwest end of the cut was sand and rock, and landslides frequently occurred here. There was always a watchman stationed at this point, who used the nearby telephone (Item 68) to notify the Turnak and Daskotna stations of rocks or slides on the tracks. Approximately 20 men worked continually clearing the track of rocks at this point.
70. Landslide area - This area was 65.5 or 66.5 km from KOLAROVGRAD and was approximately 200 m long. It was dangerous at all times, particularly during the rainy season and after snow thaws. During these periods, the Kamchiya River rose and cut away the fill from underneath the tracks, leaving them without support. In addition to this, the wall of the cut on the northwestern side of the tracks was of porous earth and water seeping through it carried away fill from under the tracks.

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In 1955, a project for constructing a retaining wall at the bottom of the fill and along the west branch of the Kamchiya River was approved by the Capital Investment Department of the Ministry of Transportation and Telecommunications. The original plan, calling for two retaining walls, was altered by Jordan STAIKOV, assistant to the chief engineer of the Transproekt Department, who recommended that only a small retaining wall be built on the west bank of the Kamchiya River. His proposal cut the estimated cost of the project from 700,000 leva to 600,000 leva. [redacted]

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[redacted] On the day the commission was to arrive, the retaining wall collapsed and a part of the fill

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Continuation of Legend to Annex K (SECRET)

(Area A) slid out from under the track, leaving it suspended in the air. The retaining wall was never reconstructed. Area A was continually being filled in, and trains had to travel this section at a speed of 5 km per hour.

71. Turnak railroad station - It had three or four tracks, approximately 600 m long. There were no water or coaling facilities. Between this station and the Manastirets stop (Item 72), there were short fills and a few small bridges; 25X1
This sector was in fair condition and there were no critical points along it.
72. Manastirets railroad stop - There were three tracks, approximately 600 m long. There were no water or coaling facilities.
73. Slide area - At this point the railroad line passed through a side hill cut on the west side, which was approximately 500 to 600 m long, 20 m high, whose sides sloped at a ratio of 1:1½. The soil was of black unconsolidated mineral mixed with clay. When it rained, slides covered the tracks. The tracks here were 50 m from the river and their elevation was 15 m higher than the river. The distance between the tracks and the base of the cut was 2 m. Small streams running down this cut kept it continually wet. A drainage ditch had been dug along its base for carrying the water from these streams off the ends of the cut, but it was inadequate. There was a narrow-gauge line running beside the track the length of the cut; it was used for hauling away dirt and rock washed down from the cut. The dirt and rock were loaded into handcars, which were pushed to the ends of the cut and dumped across the tracks into the gulley on the other side. Trains had to slow to 5 to 10 km per hour here.
74. Two fills - These fills, originally of earth, were 200 m apart and each 50' to 60 m long; there was a concrete culvert 1.5 to 2 m wide under each of them. Their sides, which were not stepped when constructed, frequently gave way, and were continually being built up with cinders. Every 2 or 3 years their culverts were extended 4 or 5 m. When last seen their sides sloped at a ratio of 1:3. In the winter, trains had to slow to 5 km per hour, in other seasons to 10 km per hour, when traveling over these fills.
75. Two tunnels - These went through a rocky hill. The one closer to ASPARUKHOVO was 150 to 160 m long, the other 200 m long. The distance between them was approximately 150 m. Their entrance walls were of stone and 1.5 m thick. They did not have ventilation systems. Both were dry. There were no light signals at their ends. Approximately 200 to 300 m before the tunnels, on both sides of the hill, were signs depicting the tunnels. When the trains arrived at these signs, the engineer blew his whistle. Each tunnel was 3.50 to 4.30 m wide; that is, there was a .7 to 1.5 m greater clearance on either side than the minimum required; there were no pedestrian dugouts.
76. Side-hill cut - This cut was 57 km from the Kolarovgrad railroad station on the west side of the tracks. It was approximately 60 m long and 60 m high, and the maximum slope of its sides was 1:1½.

Water flowing down the side of this hill was continually covering the track with earth. The soil here was of sand and rock and lacked cohesiveness; even in dry weather the hill gave way and slid down onto the tracks. In 1953,

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Continuation of Legend to Annex K

[redacted] a project to slow down the flow of water by constructing walls topped with stone arches. The estimated cost of this project was over 100,000 leva. It was approved by the New Projects Department but never realized because of lack of funds.

77. Retaining wall - It was approximately 30 to 40 m long and 1.2 m high.
78. Highway tunnel - This tunnel was approximately 10 to 15 m long; its vertical clearance was 4 m, and its horizontal clearance 5 to 6 m. Because the tunnel had been drilled through a solid rock formation, it had not been necessary to line it.
79. Highway bridge - This was a stone girder bridge which spanned the Luda Kamchiya River. Its over-all length was approximately 60 m. It was 6 m wide and had 3 or 4 arches. Clearance under the bridge was 5 to 6 m.
80. Railroad crossing - Same description applies here as that given for Item 12 of the legend to Annex K except that signals came from the Komunari and Turnak stations.
81. Asparukhovo railroad stop - Here were two tracks, approximately 600 m long, and a loading ramp, 100 m long. There were no water or coaling facilities. Only passenger trains stopped at this station.
82. Railroad overpass - This was a stone arch overpass which spanned a stream (name unknown) and the Dulgopol-Asparukhovo highway in southern Bulgaria. Vertical clearance was 6 to 7 m; horizontal clearance was approximately 10 m. The overpass was approximately 20 m wide at its base. Between the tracks and the overpass was a fill 3 to 4 m high and 100 m long. There was vegetation (including acacia trees) on its sides, which sloped at a ratio of 1:2.
83. Komunari railroad station.
84. Water tower - Its capacity was approximately 100 cu m. Its 24-hour capacity was approximately 500 cu m.
85. Underground water pipes - These steel pipes led from the pumps (Item 86) to the tower (Item 84). They were 100 to 150 mm thick and were buried 1.2 m underground.
86. Water pump station - This pump served the water tower (Item 84). It had three underground settling reservoirs. [redacted] The water was pumped from the well beside the Kamchiya River into the first reservoir, then into the second, and finally into the third, thereby allowing the trash and dirt to settle in each of the reservoirs.
87. Railroad bridge - This was a stone arch railroad bridge which spanned a nameless stream. Vertical and horizontal clearances were 3 to 4 m. Between the tracks and the bridge was a fill 8 to 9 m high and 15 m long. Its sides were covered with vegetation and sloped at a ratio of 1:1½ to 1:2.

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Continuation of Legend to Annex K

88. Railroad overpass - This was a reinforced concrete railroad overpass, 6 to 7 m long and 10 to 12 m wide. Clearance under the overpass was 5 m. The railroad line passed over a highway at this point. Between the tracks and the overpass was a fill, 2 to 3 m high, whose sides sloped at a ratio of 1:1½ to 1:2.
89. Railroad overpass - This was a reinforced concrete girder overpass, approximately 15 m long. Source believed it might have had one pillar. Highway 107 passed under the railroad at this point. The overpass also spanned the Kamchiya River. Clearance under the overpass was 5 to 6 m over the highway and 7 to 9 m over the river.
90. Highway bridge [redacted]
91. Tunnel - It was approximately 20 to 50 m long.
92. Railroad crossing - The approaches to this crossing were level with the tracks.
93. Highway DULGOPOL-KOMUNARI - This road was 6 m wide and had a waterbound macadam wearing course. It had drainage ditches.
94. Culvert - This was a steel girder culvert, 2 m long.
95. Boryana railroad stop - There were two tracks, approximately 550 m long. Ties, rails, telephone posts, and other railroad materials were stored here. The rails were of Type ULE-32, 12 m long, and were stored in piles 5 to 6 m wide and 6 to 7 rails high; there was enough for the entire line. There were sufficient ties stored here to support the number of rails.
96. Dulgopol railroad station - There were 3 or 4 tracks, 600 m long, and a loading ramp, 150 m long. There were no water or coaling facilities.
97. Railroad bridge - This was a steel-truss girder bridge, 3 m long.
98. Velichkovo railroad stop - It had three tracks, 500 to 600 m long, and a loading ramp, 100 m long.
99. From this point the Golyama Kamchiya River course was altered before 1950. After that time it continued east from RAKOVETS instead of turning toward the north.
100. [redacted] it was being worked by the State Agricultural Cooperatives [redacted] There were rice fields, wheat fields, and orchards. There was a narrow-gauge line in this area, somewhere south of RAKOVETS, possibly an industrial line.
101. Railroad overpass - This was a stone arch overpass, 7 to 8 m wide. Clearance under it was 2 to 3 m. Between the overpass and the tracks was a fill 40 m long and 2 m high.
102. Pump station - This pump station was near a spring. It was a round structure, 4 m in diameter and 2 m high (above-ground portion). It housed two electric pumps; and a diesel pump as a reserve pump. It was built in 1955. Water was pumped to the station water tower through pipes 8 cm in diameter that were buried 1.2 m underground.

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Continuation of Legend to Annex K (Secret)

103. Culvert - This was a stone arch culvert, 7 to 8 m wide. The culvert opening was 2 m high and $2\frac{1}{2}$ m wide. The line here was built on a fill 4 m high and 200 m long. The culvert passed through this fill.
104. Nova Shipka railroad station - It had 4 or 5 tracks, 600 m long, a loading ramp, 150 m long, and a water tower. There were no coaling facilities.
105. Water tower of Nova Shipka railroad yard - Its capacity was 100 cu m; its 24-hour capacity was 500 cu m. It was 15 m high and was built in 1955.
106. [REDACTED]
107. Slide area - This area was 300 to 400 m long. In 1955 or 1956, this entire area moved, causing a break in the line. The area was uncontrollable; [REDACTED] the alignment would be changed in the future.
108. Railroad line YUNAK-STARO ORYAKHOVO - This was a normal-gauge line.
109. Railroad overpass - The railroad here passed over another line. This was a concrete girder slab overpass, 6 m wide, resting on stone abutments. Horizontal and vertical clearances under the overpass were 5 m.
110. Through-cut - The east side of this cut sloped at a ratio of 1:1 $\frac{1}{2}$. It was 15 m high and 150 m long. It frequently gave way, covering the track with earth. One small section was held back by a retaining wall, 40 m long. In 1954 plans were drawn by Transproekt to extend this wall, but because of a lack of funds they were never carried out.
111. Yunak railroad station - There were three or four tracks, 600 m long, and a loading ramp, 100 m long. There were no water or coaling facilities. The branch line to STARO ORYAKHOVO started at this station.
112. Sindel railroad station.
113. Line 2 to KASPICHAN-SOFIA.
114. Line 2 to VARNA.

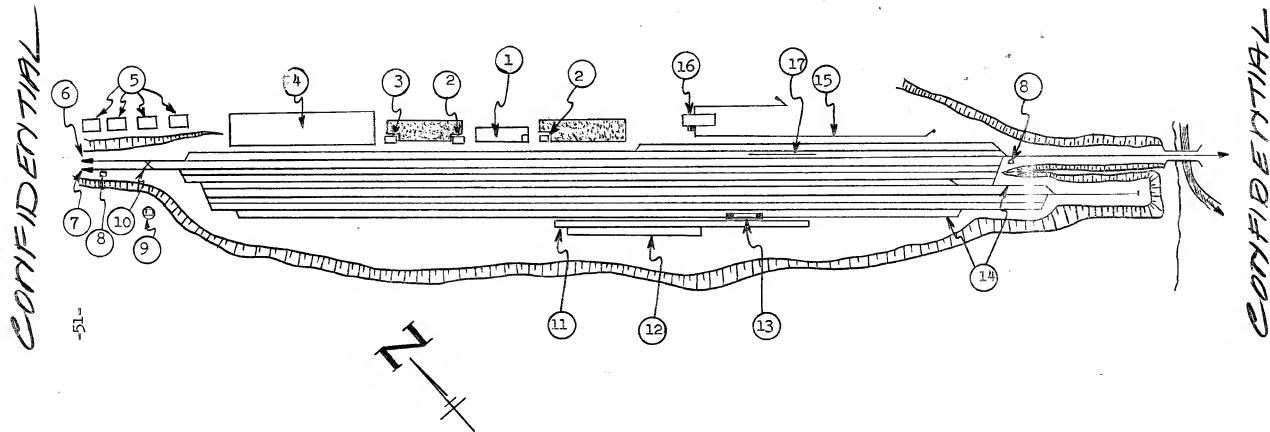
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ANNEX I
SKETCH OF KOMUNARI RAILROAD STATION, BULGARIA



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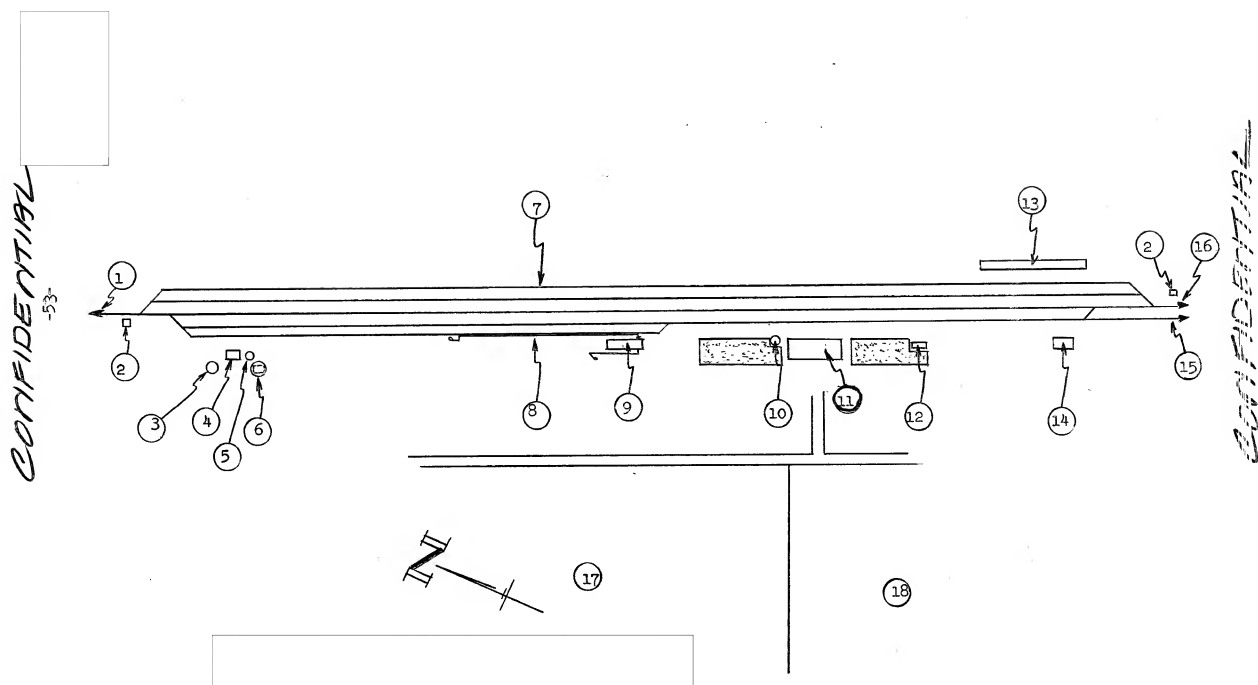
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Legend to Annex L

1. Station building - This was a 2-story building, 40 m long and 15 m wide. It housed the administrative-dispatch office, ticket office, waiting room, snack bar, and an auxiliary telephone central for the Polyanovgrad-Kolarovgrad-Sindel-Varna line. On the second floor were quarters for railroad personnel.
2. Drinking fountain.
3. Latrine.
4. Coal stockpile - The pile was 80 to 100 m long, 30 m wide, and 2 m high, and was covered with boards. The coal was in briquette form.
5. Living quarters for railroad men and maintenance men for this sector of the Belbreg-Turnak highway.
6. Track to SINDEL.
7. Track to KOLAROVGRAD.
8. Switch control tower - The switch was operated manually by a switchman who received his signal by telephone from the stationmaster.
9. Water tower - It was 15 to 18 m high. Its capacity was 100 cu m; its 24-hour capacity was 500 cu m. In 1957 plans were drawn by Transproekt to build in 1958 a drain to carry water from the stream at UTM NH 220615 to this tower. It was to serve as an emergency water source in case the pumps broke down.
10. Turnout.
11. Concrete ramp - It was 100 to 120 m long, 3 m wide, and level.
12. Temporary locomotive depot - This was a 1-story, tar-papered wooden building, 60 to 70 x 15 x 4 m. As of 1958, it was being used for storing prefabricated wooden bridge sections and other railroad materials.
13. Maintenance ramp.
14. Five tracks - These were built in 1953.
15. Loading ramp - This was 150 m long.
16. Freight office - This measured 10 x 7 m.
17. Electric crane - This was a bucket-type crane used for loading coal into locomotives. The coal was piled between the tracks. The crane moved on a track 50 m long.

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ANNEX M
SKETCH OF SMEDOVO RAILROAD STATION, BULGARIA



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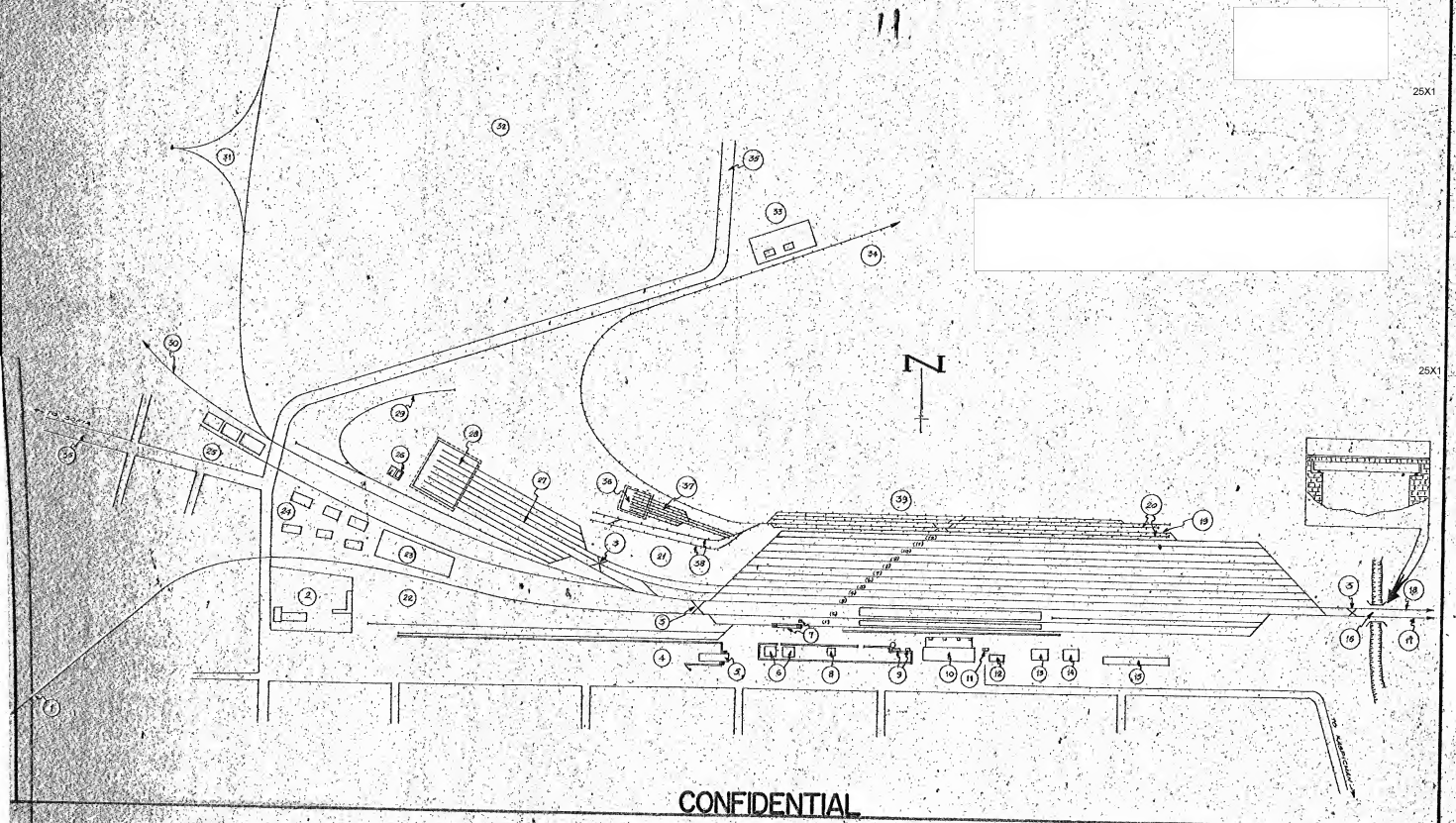
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Legend to Annex M

1. Track to KOLAROVGRAD.
2. Switch control tower - The switch was manually operated by the switchman when he received the signal by telephone from the stationmaster.
3. Well - This well was built in 1953 and was 9 to 10 m deep. There were three pumps inside the well, two electric and one emergency diesel.
4. Quarters for railroad personnel - This was a 2-story building, 9 x 6 m.
5. Old well - Same type as that described in Item 3.
6. Water tower - It was 18 m high and had a round top. Its capacity was 60 to 80 cu m; its 24-hour capacity was 350 to 500 cu m.
7. New track - This track was built in 1954 and was 600 m long. Its rails were Type ULE-32.
8. Loading ramp - This was 150 m long.
9. Freight office - This office measured 10 x 7 m.
10. Well and pump - The water supplied by this well was for drinking.
11. Station - This was a 2-story building, 10 x 6 m.
12. Latrine.
13. Warehouse - Track material was stored here. The building also served as a tool shed for the maintenance crew. It measured 15 x 4 m.
14. Maintenance office - This was a 1-story building, 7 x 5 m. It served as the quarters and office for the maintenance man.
15. Spur to unidentified military depot.
16. Normal-gauge track to KOMUNARI.
17. Machine tractor station (Mashino traktorna stantsiya - MTS) including maintenance shops - There were six or seven 1- and 2-story buildings.
18. State Agricultural Cooperatives buildings (Trudovo Kooperativno Zemelsko Stepanstvo) - There were five to seven buildings used as warehouses, stables, and pens.

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ANNEX "G"
SKETCH OF THE KASPICHAN RAILROAD STATION, BULGARIA



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ANNEX C
SKETCH OF GORNA ORAKHOVITSA RAILROAD STATION, BULGARIA



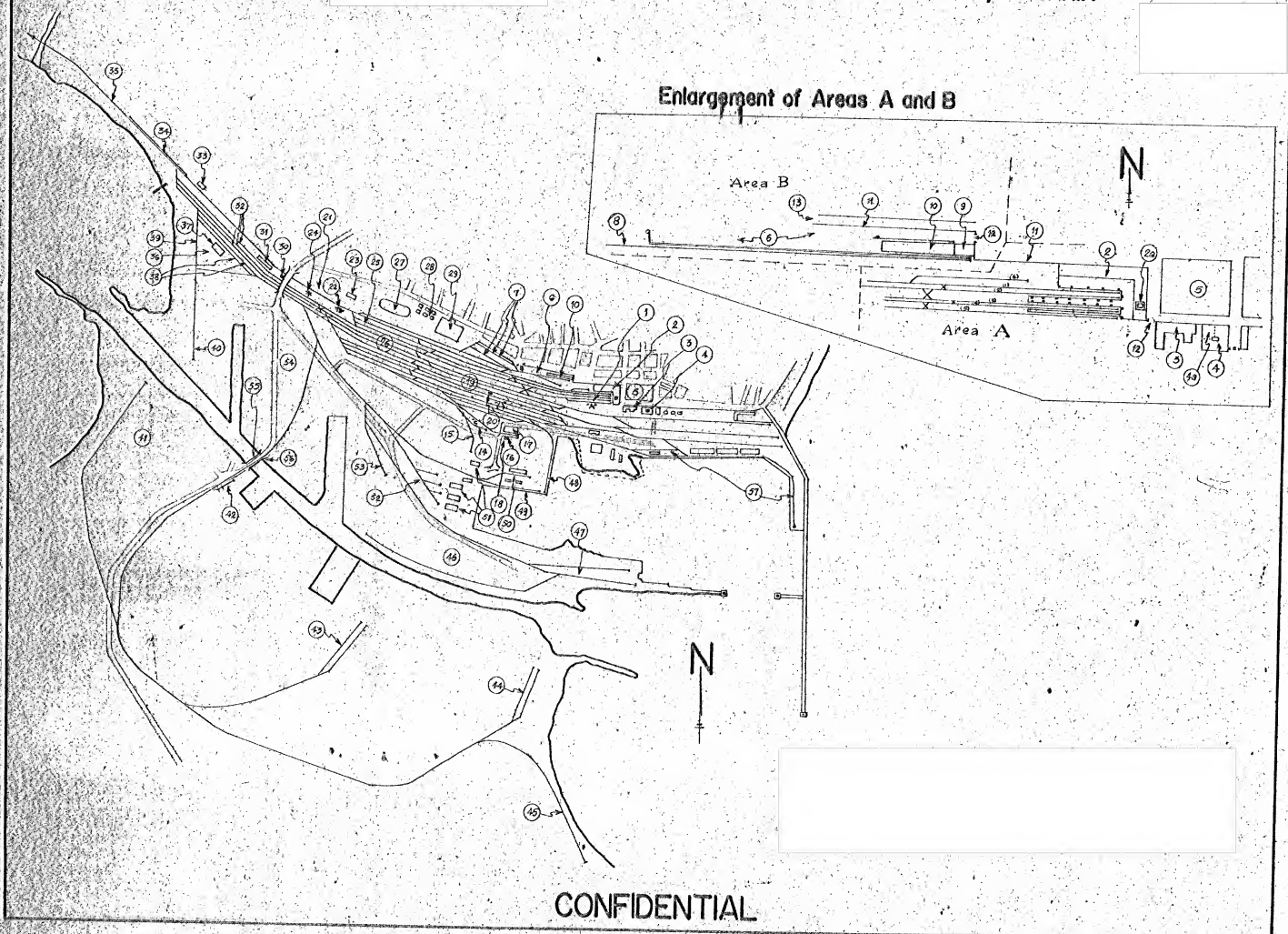
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ANNEX "J"

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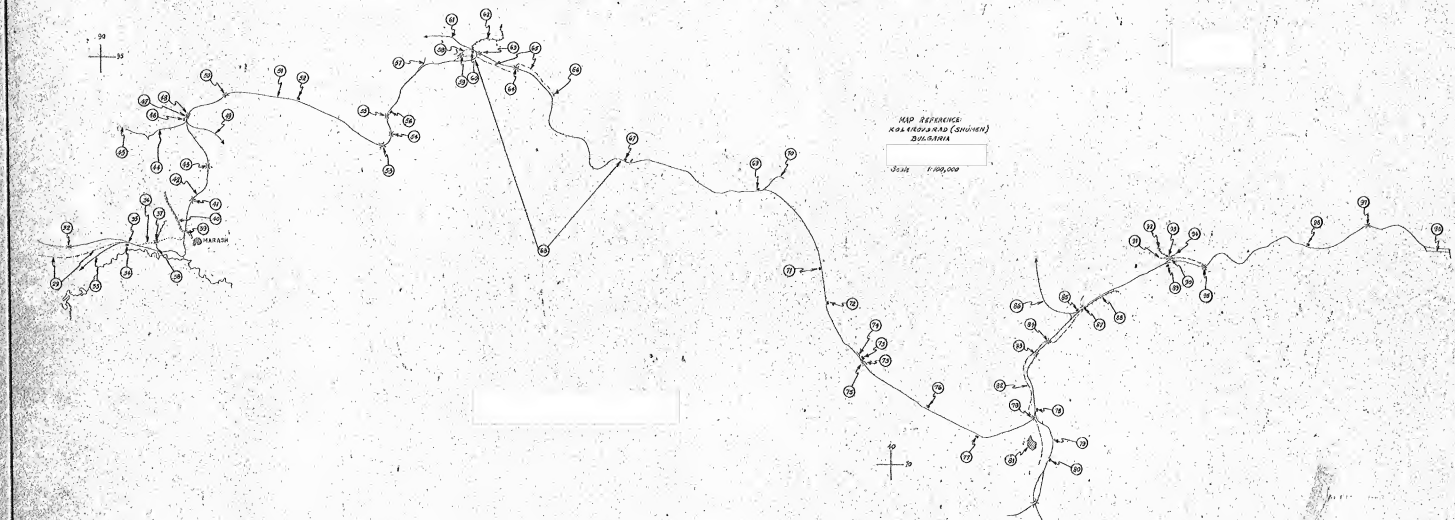
SKETCH OF THE VARNA RAILROAD STATION, BULGARIA



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ANNEX "B"

OVERLAY OF TSAR KRUM-VARNA SECTOR OF THE BULGARIAN RAILROAD LINE 2



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ANNEX "A"
OVERLAY OF GORNA ORAKHOVITSA-KOCHOVO SECTOR OF BULGARIAN RAILROAD LINE

MAP REFERENCE
TURKOVITSA, BULGARIA
SCALE 1:100,000

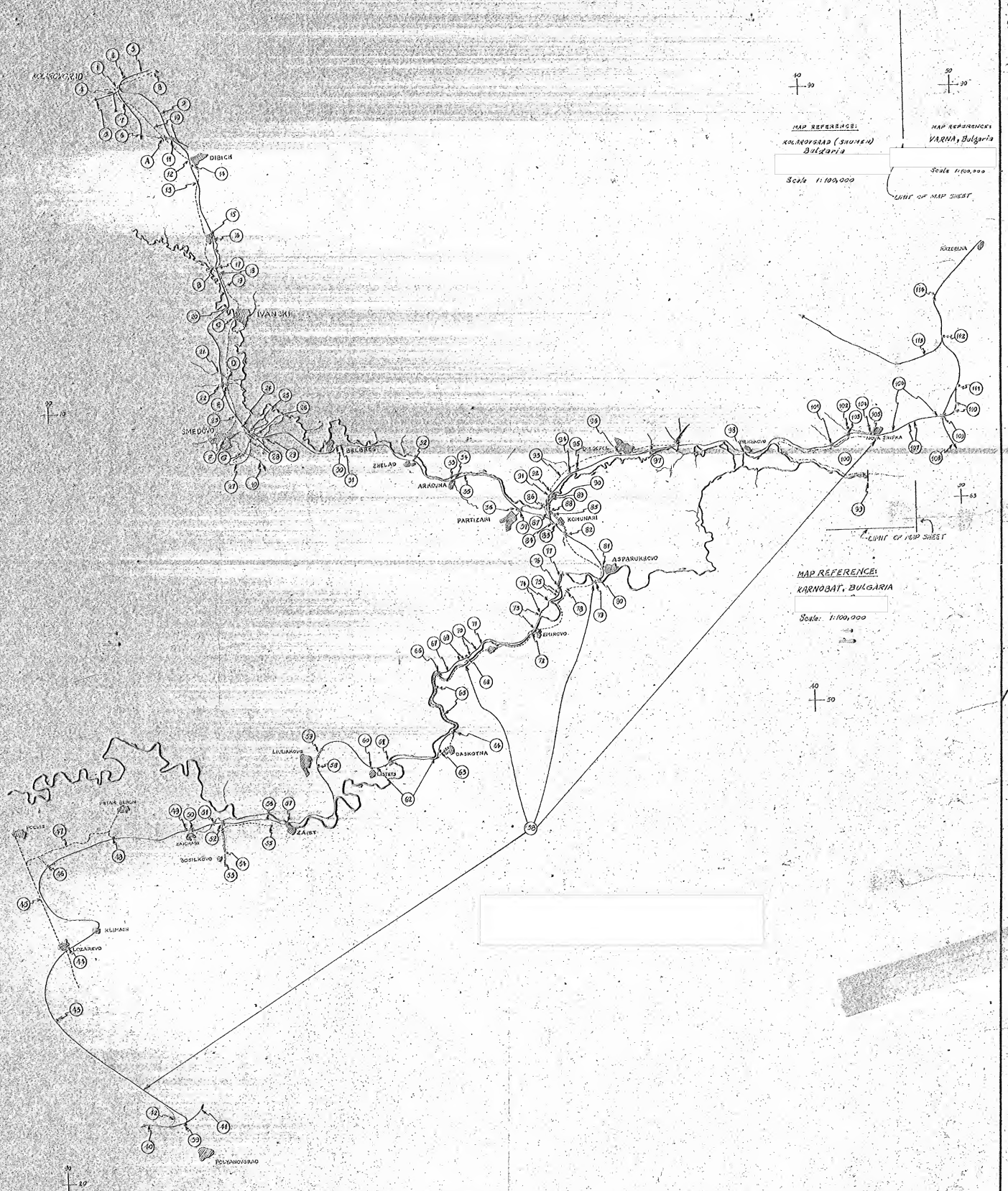
MAP REFERENCE
TURKOVITSA, BULGARIA
SCALE 1:100,000

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ANNEX "K"

OVERLAY OF RAILROAD LINES KOLAROVGRAD-KOMUNARI AND POLYANOVGRAD-KOMUNARI-RAZDELNA (SECTOR OF LINE 3)
BULGARIA



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